

***United States Court of Appeals  
for the Second Circuit***



**TRANSCRIPT**





APPEAL  
75-6068

PETITION  
75-4164

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United States Court of Appeals  
FOR THE SECOND CIRCUIT

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SUN ENTERPRISES, LTD., SOUTHERN NEW YORK FISH AND GAME  
ASSOCIATION, INC., LYMAN E. KIPP, RICHARD E. HOMAN, NO  
BOTTOM MARSH and BROWN BROOK, *Plaintiffs-Appellants,*

—against—

RUSSELL E. TRAIN, *et al.*  
[“Federal Defendants”], *Defendants-Appellees,* and  
HERITAGE HILLS OF WESTCHESTER, *et al.*  
[“Private Defendants”], *Intervenors.*

SUN ENTERPRISES, LTD., SOUTHERN NEW YORK FISH AND GAME  
ASSOCIATION, INC., LYMAN E. KIPP, RICHARD E. HOMAN, NO  
BOTTOM MARSH and BROWN BROOK, *Petitioners,*

—against—

ADMINISTRATOR OF THE U. S. ENVIRONMENTAL  
PROTECTION AGENCY, RUSSELL E. TRAIN,  
*Respondent,* and  
HERITAGE HILLS OF WESTCHESTER, *et al.*  
*Intervenors.*

Appeal from the U. S. District Court for the Southern  
District of New York

Petition to Review Order of U. S. Environmental  
Protection Agency

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TRANSCRIPT OF DEC Hearing, Volume 5 of 9

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# THE STENOGRAPHIC RECORD

STATE OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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In the Matter

of

the Application of HENRY PAPARAZZO and  
CURTIS McGANN (HERITAGE HILLS) for the  
acquisition of a source of water supply,  
etc.

Water Supply Application No. 6284

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October 3rd, 1973  
Town of Somers, N. Y.

PAULINE E. WILLIMAN  
THOMAS P. FOLEY  
CERTIFIED SHORTHAND REPORTERS  
41 STATE STREET  
ALBANY, N. Y.



STATE OF NEW YORK  
DEPARTMENT OF ENVIRONMENTAL CONSERVATION

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In the Matter

of

the Application of HENRY PAPARAZZO and CURTIS McGANN (HERITAGE HILLS) for the acquisition of a source of water supply by the development of wells to ultimately supply 1.2 million gallons per day and the construction of a water supply and distribution system to provide service to a planned residential community consisting of approximately 3,000 living units known as Heritage Hills of Westchester County, for the construction of a dam approximately 20 feet high to create a pond having an area of approximately 1.6 acres on an unnamed tributary, known locally as Brown Brook, of the New Croton (Muscoot) Reservoir which is designated H-31-P-44-18 and which has been classified C(T), for the construction of a sewage effluent discharge structure, and for relocation of approximately 650 feet of the so-called Brown Brook to build a sewage treatment facility.

Water Supply Application No. 6284

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CONTINUED TRANSCRIPT OF PROCEEDINGS

held in the above-entitled matter at a hearing held by the New York State Department of Environmental Conservation at the Town Hall, Town of Somers, Westchester County, New York, on Wednesday, October 3rd, 1973, commencing at 10:00 o'clock A.M.

PRESIDING: WILLIAM J. DICKERSON, JR.,  
Hearing Officer.

APPEARANCES: (As heretofore noted.)

P R O C E E D I N G S

MR. DICKERSON: O.K. Ladies and gentlemen, we'll continue this morning. As we mentioned previously, this is a continuation of a hearing before the Department of Environmental Conservation in the matter of the application of Henry Paparazzo and Curtis McGann under Water Supply Application No. 6284. I think everybody present is generally familiar with the outline of the proceedings as far as the application submitted having to do with the condominium project known as Heritage Hills of Westchester.

When we broke last night, Mr. Bibbo was undergoing cross-examination and at that time Mr. Florence, I believe, was going to be next.

Now, did the Department have any questions?

MR. MANNA: Yes, we do.

MR. DICKERSON: Do you want to ask them now? Mr. Florence had requested to be last.

MR. MANNA: All right, we'll ask them now.



MR. DICKERSON: -- for cross-examination.

LEONARD J. BIBBO,

being recalled as a witness, for and in behalf of the applicant, having been previously duly sworn, was examined further and testified as follows:

CROSS-EXAMINATION

BY MR. MANNA:

Q. Mr. -- good morning.

A. Good morning.

Q. I know you've already stated the erosion control practices that will be put into effect or that have been put into effect, but I have here a letter before me from yourself to Mr. George Danskin with an accompanying consultive service, United States Department of Agriculture, Recommendations, Land Use and Treatment to be furnished.

A. Mr. Jonas' --

Q. Mr. Jonas' work, yes. Would you like to identify those?

A. Thank you. Do you want to see them?

(The documents were handed to  
Mr. Blasi.)

THE WITNESS: Those are our -- that  
is a report given to me by Mr. Jonas after a joint  
field trip with him.

Q. Can -- excuse me.

A. I'm sorry.

Q. Can you tell me what procedures are in effect on  
the site now and how have you complied with this  
report or this recommendation.

A. Basically we've -- well, one of the procedures that  
was in effect at the time Mr. Jonas was inspecting  
was the use of bales of hay for siltation control.  
We had, for lack of a better term I'll call them  
right now ponding areas or potential ponding areas  
for silt traps; that's what they are. He reviewed  
those and made some suggestions about enlarging  
some of them and improving some others. He suggested --  
we concurred on the method of grading, that grading  
be -- grading of roads be pitched to a direction  
where runoff would lead to a silt trap. It was done  
in some cases and not effectively done in some other  
cases and that is being corrected.



I think one of the high points of his report was a suggestion on his part that during construction, every Friday night if you will, regardless if these slopes were finished or not, seed the slopes with rye grass. In this way if you didn't have a chance to get back to them -- excuse me -- at least grass would start to take hold and stop some erosion from unfinished slopes, and this was implemented.

Q. O.K. Now, this recommendation refers to the first two condominium complexes. Can you locate those on the Exhibit No. 22, approximately?

A. At the time that we were out there we were working in the model area and started the area for the condominium complexes.

MR. DICKERSON: Mr. Bibbo, would you mark with a black marker pen on Exhibit No. 22 the outline of the area you're discussing?

THE WITNESS: I can't give you precise dimensions but I would say that the area that we were covering at the time --

MR. FLORENCE: Black dotted line.

MR. DICKERSON: Let's get it marked



and we'll label it.

THE WITNESS: We might have been up in this area. It's kind of difficult to say just how far up we were, all right? But just as an average, let me take this as being the area that had been covered.

(Witness marks exhibit.)

Q. O.K. Thank you. No special precautions then, or there was no procedure outlined perhaps to design specifically to protect the stream itself, just a general erosion control plan?

A. Yes. As far as the stream itself goes, as I stated before, we were using bales of hay. In fact, the whole golf course area, the northerly portion of that map on the easterly side of Warren Street down by the stream area had been lined with bales of hay down by the stream bed to prevent silt from running into the stream from any construction work. There is a stone wall on the westerly property line easterly of Warren Street and if you will observe that area that I marked in red which shows a dam and come about an inch and a half south on the paper, you'll see a black line proceeding southerly, and that's all stone

wall and what we have done in there, that stone wall in itself acts as pretty well in silt trap retention. We found a couple of openings in the stone wall which we again lined with bales of hay. The Nardellis are just northerly of us on the service area, utilities area. They had called and said that some silt was getting through and we went out there and plugged -- there were two openings in their stone wall. We plugged them with bales of hay and they seemed to be pretty effective.

(Continued on page 804)



Q. In your opinion, how has the hay berm functioned; has it functioned adequately?

A. The hay berm has functioned adequately. I've had a trouble spot or two in there and I'm having a little trouble pinpointing it and I've got to get back up there and take another look at it.

Q. You haven't taken any soil samples of the material that has settled out of the base of this, have you, on the drain side perhaps, any indication of what material actually is settling out?

A. In the -- settling out where, on the property itself?

Q. Against the berm or at the berm?

A. No, I haven't taken any soil samples but it's my visual analysis it's silt. You can -- if you examine the bale of hay, just looking at the outside of it, you'll see stuff clinging up against it and if you kick it with your foot, it will kick off in fine dust.

Q. All these procedures that you've mentioned have basically been at the recommendation of SCS. Have you done anything beyond that, anything beyond their recommendations?

A. I thought that their recommendations were pretty

comprehensive in the area, in that area. One of the things that we were doing, of course, and which would help, of course, would be the paving. As soon as I mention that, that road up through there was paved, of course, and curbs put on, it would be an additional source of silt and that was to be done shortly after, within a couple weeks after, within a few weeks after we made our inspection. I find that it's something that needs continual attention. The best laid plans of mice and men are ruined by some man with a piece of equipment backing up over something and plugging -- knocking a hole in that which you have constructed to trap silt, so you get back up there and you find a problem area and you get it cleaned up and protected again.

Q. Referring again to the SCS reports, it mentioned that all sediment should be kept out of the pond to be constructed in the entrance area. I realize, of course, that Mr. Jonas, or his assistant wrote this, but can you tell me in your own words or in your own opinion what this was designed to accomplish by keeping sediment out of the -- out of the pond area instead of using it perhaps as a silting basin?



A. Well, this is -- this is one point where I'm not quite sure that I agree with Mr. Jonas on it. What he wanted was that silt traps be constructed to -- let me point out a pond. The pond that he's referring to is the pond just below the sales and administration model area.

MR. DICKERSON: Will you please mark it in blue on Exhibit 22.

(The witness marked the exhibit.)

THE WITNESS: I'm going to crosshatch the pond, all right? Now, what Mr. Jonas had suggested was that we construct silt traps above that pond and catch the silt before it went into the ponding area. We have in our design provided for drainage from the model area. We split the drainage, drainage from a good portion of the condominium was coming down into that pond area. In other words, we split off that portion of drainage and brought it around and into that pond that I've just crosshatched and we felt that this would be the place to do our maintenance and have silt traps. It's fine, you know, keep it out of there now. We're under construction. The pond is below the water surface. In other words,

it's not entering -- the pond is not a retention area, so it is a below grade pond and by allowing the silt to come in at that end it would be a point of easy maintenance and it would be the point that would actually be maintained in the future. So we have not implemented that particular portion of it.

Q. O.K. While we're on the subject of drainage, would you generally describe the system of storm drainage that is -- that will be in effect on the site presently and when all storm drainage lines are complete. How will they drain? Will they drain into this pond? Will they be diverted from -- perhaps from the Brown Brook drainage area to another drainage area or --

A. No.

Q. -- just generally can you describe this?

A. Yes. We've used the natural division lines imposed by the grades and contours that exist and we've taken a drainage from those basins, brought them in there, into the direction which they flowed before so, therefore, I speak of the division of the drainage going into that pond. There's a natural cutoff line just above that model area through which drainage runs south and southeast and then in a



westerly direction and through that ponding area and eventually into Brown Brook and we've kept that drainage pattern. The area north of that, there's a natural ridge line on both sides of Warren Street which runs north up into Carmel and that drainage runs down into Brown Brook. That's been kept also.

Q. So in the interfacing areas you haven't taken -- you haven't diverted drainage that would normally go to Brown Brook into the Question Mark Brook or anything else?

A. No. It's always been a rule as long as I can remember that, and I believe there were some court cases to substantiate this, that you may take drainage that flowed in an area and concentrate it. You may not take drainage that did not flow in that direction before and bring it down, so that what we've done is adhere to that and use the natural division lines for their individual drainage patterns.

MR. BLASI: Speak up a little bit.

THE WITNESS: All right.

Q. So you are not, in effect, enlarging any of those drainage areas and decreasing any other. They all remain the same?

A. They're all the same.

Q. O.K. In the same vein, can you possibly indicate how development will change the coefficients of runoff in this area? Have you C factors or anything that you might have calculated before and after?

A. Yes, I have curve numbers. The major portion of this drainage basin, 50 percent of it lies in "D" soil; approximately 25 percent of it lies in "C" soil.

Q. Would you explain for the record what "C" and "D" soils are? Just generally.

A. "D" soil, it would be like grading on a report card. "A" soil is very good and very porous. The "D" soil is very poor relatively.

Q. But you're referring to the soil cover complex?

A. That's correct. We use the Soil Conservation method of soils and we found that 5 percent of this drainage basin was "A" soil and approximately 20 percent of the entire drainage basin was "B" soil and we used the weighted factor and it came out that we find that we would have a CN curve number before development of approximately 72 and then -- and I'm afraid I'm ultra-conservative in this, I assume development of the entire drainage basin, the extent that there



would be one-unit development on four acres right up into Carmel and we wound up with a CN number of 8 on a weighted curve, probably could have been less but, as I stated before, I have no control over what could happen. I had stated yesterday that I thought the zoning up in Carmel was half-acre or one acre. Most of it, a lot of it, has been changed to R-60 which is 60,000 square feet but conceivably this could change in 10 years. So we took that into account.

(Continued on page 811)

Q. O.K. Can you possibly tell me then how flows in the brooks, in all three brooks, primarily Brown Brook and secondarily Question Mark Brook and thirdly the tributary of Plum Brook, crossing the Heritage property, can you tell me how those flows are likely to be increased as a result of development? I'm speaking in terms of extra cfs, gallons per day, whatever you want to relate these in.

A. There would be some increase, but it's a matter of working numbers more than anything else. This is a conservation type zoning. There are large areas which are open space, large areas for golf course. I believe there is about 230 or 240 acres of golf course. If you look up Warren Street you'll see there is a major belt of undisturbed area. As I said, I was being ultra-conservative. I immediately jumped from it before to an assumption of total development all through the entire area. So while we might have come up with a couple hundred cfs more for total development, I really don't feel that it will be that way in actual practice.

Q. Are you saying then that the retention of the ponds and the golf course will offset any real increases



as a result of --

A. Yes, I think they will do very much to offset it. For instance, we have a large swamp area up in the north of this property and just south of the Carmel town line on the west side of Warren Street, and that was taken into account. I've been, by the way, over this entire property. I walked that swamp, from one end up the westerly side and back down the easterly side. I know what its capabilities are. We have examined it. We know there is a gas line through it. We know what the effect is. We have calculated the cross-section at the outlet. We've calculated the possibility of a weir factor. There is a swamp also on the easterly side and again being ultra-conservative it indicates, my last calculation going by Soil Conservation, I said forget about the swamp on the easterly side, it has no effect. I did not take into account effective storage along the golf course or low areas as we come down through that Brown Brook. I did not analyze this entire area, each and every house and how it would affect it. I think the units are small. There is savings in pavements in that you might have one-and-a-half cars per unit and some of

that is allowed in your garage space whereas in a normal house you would have a larger house, the type of house that's going up 2,000 square feet, you'd have probably a 30-by-30 turnaround area for parking on there. So I really don't see too many offsetting factors. As I said, we were very conservative and we just jumped from one total development, eliminated certain areas that could retain in calculation and arrived at our number, which didn't really show any huge increases.

Q. Thank you. I know you have already stated several times the purpose of the pond. Will you tell me though what role these might play in capturing and detaining surface runoff or are they primarily as you have already stated for as these particular -- do they have a functional role as well?

A. Yes, they have a functional role. For instance, the below grade pond that I was speaking of in the model area, I believe it's about three acres, possibly a little more, the original design called for a box culvert underneath the road, sized to pass storm flood through it. What we did, we immediately graded and eroded it and restricted that flow out of there



through an 11-by-18 culvert. Now, there is a drainage basin that flows around and down and takes in what we call Hope Lane and the development that exists right here to the north of us and flows down through that area, and we're taking care of all of that by restricting the opening and the ability for flow out of that area and allowing it to back up on our own property. We've done the same thing with the pond up there which is roughly about 24, 25, 26 acre-feet in that pond area for storm waters to back up. At the conclusion of the 150 percent of a hundred-year storm structure allows us to rise even more so we're taking the head off a peak on something like that.

Q. Would you please describe the method of draining this pond, down in the model area, how that is discharged to the brook, to the Brown Brook.

A. There is a natural outlet connecting a couple of swampy areas, and that will be maintained. That was the one I was referring to, the 11-by-18 culvert going across, strictly an equalizer culvert allowing water as it backs up to flow through. If there is not that much rain it will have the normal capability of passing it. If we had a storm of sufficient capacity we could back up 10 or 12 inches on our own property.

Q. There would be no channel or piping to the Brown Brook. This will just be a natural surface flow discharge?

A. This is, as I have originally intended it, yes.

Q. O.K. You've already stated also that it will take less than a day to fill up the dam above the road crossing using the 30 to 40 cfs that you have registered. My own indication is that it will take considerably longer. I'm just wondering, the 30 to 40 cfs, what period of a year did you say that was for? Is that a spring runoff or --

A. I believe we had made that measurement in May sometime,



in the end of May or the beginning of June, somewhere around that area.

MR. DICKERSON: May '73?

THE WITNESS: Yes, this year. And we started right up in Carmel and measured the cross-sections, down through, took our flows, and we found we had increasing flows as we ran down and we checked out our coefficient runoff and tried to get the best coefficient and runoff. Instead of 30 cfs. it could have been 40 cfs. I took an average of a couple of stations and said that that's what the flow would be approximately at that time.

Q. Would you say that this range is perhaps a normal flow or would you say that it is likely to be the case at the time of construction or filling of this dam?

A. I would think it would be the case at the time of the filling of the dam. It would not make any sense to try to fill that dam at, say, the middle of August when the flows have dropped way down. You could wait another month and have a good sized rain come down and you'd have sufficient capacity to fill that.

Q. That leads into my next question. Are you aware of

the flow data recorded in the biological base line study -- it's an exhibit, but I don't know which one -- prepared -- the study was prepared by Bill Keane of Dolph Rotfeld Associates.

A. I don't know the exact number. I think that I understand that it's a low flow data.

Q. It's considerably lower. I just wondered how you'd reconcile the two differences, just being a seasonal flow?

A. Oh, definitely.

Q. I know you've also talked about these relocation procedures. Would you quickly describe those again.

A. You're talking about the one below --

Q. Yes, I'm skipping to a different area of subject matter now. The relocation that is the subject of the application, would you just quickly go through that again.

A. All right, I've got a plan -- I've got it on a plan and I think I stated in that report -- and I think if I quoted that, it would be the best way.

MR. DICKERSON: Referring to Exhibit 35.

THE WITNESS: Exhibit 35.

A. (Continuing) You've got a construction sequence

PAULINE E. which calls for --

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MR. DICKERSON: Speak up a little bit, please.

A. (Continuing) The construction sequence in the relocation of the stream calls for, first, the installation of the outfall sewer, then the cutting of the new channel from its outer point or its point of meeting the old channel downstream to a point within a few feet of the new -- of its new inlet, then seeding the new channel and after the new channel has been stabilized placing bales of hay in the new channel under my direction and, at that point, after I'm satisfied that the new channel has been stabilized and can accept the water, cutting the inlet of the new channel through to the old channel and allowing the water to run and then after I'm satisfied that the water is flowing clear, any sediment has been dropped out or trapped, removing the bales of hay, and that would be only when directed.

Q. What type of machine will cut the channel for this?

A. It could be a backhoe or it could be a Gradall.

Q. Will access be provided from the western -- or from Warren Street or will you have to cross the stream?

A. I'm sorry?

Q. To dig the channel west of the present channel you will have to either cross the stream from the eastern portion or you will have to come in from Warren Street. How will you dig the new channel? Will you cross the stream bringing the machine from the site side or will you come in from the Warren Street utility area entrance?

A. There is an area for them to come in on the Warren Street utility area.

Q. You see no problem as far as the mucky nature of the soil? You'll be able to dig the new channel in the dry without causing a breakthrough or collapsing or getting the machine stuck, no problems of this nature?

A. I can't promise I won't get a machine stuck but I see no other problems.

Q. Generally what type of material would you say exists in that area of the stream, and may I ask why you chose a banked slope of 1 on 1-1/2?

A. Banked slope of one on one and a half is an efficient section.

Q. Hydraulically sufficient?

A. Yes.



Q. Is it a stable section?

A. One on one and a half is generally a stable section for fairly short heights. I would not say it would be a stable section for 15-foot height or something like that, but 8 feet height or 10 feet height you can.

Q. O.K. Can you tell me approximately how this new channel configuration will change the velocities in the stream?

A. On that sheet is a -- on this drawing I have shown a chart and channel capacities.

MR. DICKERSON: That's Exhibit 35?

THE WITNESS: On Exhibit 35.

A. (Continuing) I have the computed runoff versus depth of water in area. For six inches of water I would have 9.1 cfs in an area of 3.58. If I divided that one through by the other I would come out with a velocity of less than 2 feet per second. I have found through my stream computations that I have been running at the time when I compute them in May and June of 6 to 9 feet per second running down through that stream area. So I would say that a 3-foot depth in that particular channel,

205 cfs with an area of 31-1/2, if I divided the 205 by 31 I would get somewhere approximately six feet per second. So I'm not -- I think that maybe this is a more efficient section than is actually there.

Q. So what you are saying is that the velocities will not be substantially increased.

A. I will even go to the point of saying by the number I have just computed that my velocities would even be reduced some.

Q. Reduced some? O.K., fine.

Does this channel, does the configuration conform to any of the stream mechanics principles that you are aware of, say, pool ripple relationship, meander length, any of these things? Are you aware of any of these? Were they taken into consideration? What are they, if you have? I refer specifically to meander length being perhaps 10 times the channel width, radius of the curves being approximately two to three times the channel width. Have any of these physical parameters been incorporated in this design or do you feel that they are not really required?

A. No, I didn't feel they were really required for the



simple reason that what we have done is re-lined the channel and made it more efficient and a smoother channel. If you take a look at this ~~drawing right~~ here, and you can see where you have very short meander lengths. These create obstacles in time of flood. What we have done is smooth this thing out to get it past the sewage treatment plant area. It's an efficient stream section and we feel it will work. It wasn't that I had to dodge between stone walls and all, then start making computations as to whether I was fouling things up.

(Continued on page 323)

BY MR. MANNA: (Cont'g.)

Q. With regard to flooding frequency, all facilities will be located above the 100-year flood plain?

A. That's right.

Q. Is this 100-year capacity completely in channel or are you -- are you contemplating -- are you planning on storage in the flood plain or --

A. Coming by the sewage treatment plant, is that what you're speaking of?

Q. Yes, in that area.

A. No, it's in channel.

Q. It's all in channel?

A. Yes. I find that, for instance, the thousand-year flood storm computes to be 1,080 cfs. and as I come by the sewage treatment plant, I would say that I'm in elevation 355½. The top of concrete poured for the sewage treatment plant is 365, so I am 9½ feet different and I find that at a seven-foot depth of water, I can carry a capacity of 11 -- 1,183 or '84 cfs. and at 8 feet I can carry 1,589 cfs. so I know I'm in channel.

Q. O.K. We are also concerned, of course, with providing for low flows. Would you object to perhaps lowering



one side of this channel perhaps six inches to concentrate low flows and is this compatible with the flood protection?

A. You mean cutting it down on one side?

Q. Just cutting it down on one side.

A. No objection at all.

MR. MANNA: No objection to that? We would like to take whatever notice we might on that.

MR. DICKERSON: Well, when you present the Department's statement, you make it as a recommendation if that's what you wish.

MR. MANNA: O.K.

Q. Can you tell me as a result of this new channel, will there be any change in the flow pattern at the Warren Street culvert?

A. I don't see any material change at the Warren Street culvert. Really, that's -- that Warren Street culvert itself will be a controlling point.

Q. M-m h-m-m.

A. It's a very small culvert pitched in the wrong direction and we'll have water on our property during any time of a rain storm.

MR. MANNA: O.K. Thank you.

MR. DICKERSON: One question, please:

What is the elevation of the aeration chamber? I notice you have the invert at 352.24. Do you have any idea of how high it is?

THE WITNESS: No, that --

MR. DICKERSON: Could that be overtopped by the 100-year frequency storm flows?

THE WITNESS: No, it wouldn't be overtopped. I couldn't give you an exact elevation but it would not be overtopped. I have not made a -- I have not personally made a computation. My staff did and I've been assured that it would not be overtopped. If I had the plan, I could make that computation myself right now. I don't have the sewage treatment plan with me.

MR. DICKERSON: Mr. Florence?

MR. MANNA: Excuse me, Mr. Hearing Officer, I'd like to offer this, the Soil Conservation Service recommendations that I've referred to previously, into evidence.

MR. BLASI: No objection.

MR. MANNA: And with the letter to Mr. George Danskin.



MR. BLASI: As one exhibit?

MR. DICKERSON: For identification, Exhibit No. 36 is a letter addressed to Mr. George Danskin, New York State Department of Environmental Conservation, the address being that of the Regional Office in New Paltz signed by Leonard J. Bibbo, with an enclosure of a two-page report on the letterhead of the Consultant Service, United States Department of Agriculture, three pages, for identification Exhibit 36. Mr. Florence, want to take a look?

(The documents described above were marked for identification as Exhibit No. 36, this date.)

THE WITNESS: Mr. Dickerson, if I may, enlarging that question you asked me before --

MR. DICKERSON: O.K. Let's continue then. With reference to the aeration tank?

THE WITNESS: Right. Preceding the grading in the area at the south end of the aeration tank is 360 and we are opening up -- the channel is opening up or now starting to open up at that particular point.

MR. DICKERSON: O.K. Thank you. You

answered that particular point.

BY MR. MANNA:

Q. If I may just continue with one more: What erosion controls will be in effect at the dam site north of the road crossing? I know as yet you have not decided on the type of stilling basin, but what procedures or what methods will you use to control scour erosion at the -- at the dam faces?

A. That's a good question. We intend to drop the velocities -- and I'm speaking of velocities which would be a hundred -- you know, in effect, at 150 percent of a 100-year storm. We're going to drop those velocities down each 10 feet per second. I said 8 yesterday. We're trying to reach that range and feeling that if I can drop those velocities down to roughly 8 feet per second at 150 percent of a 100-year storm, why, at a 100-year storm, why, I'll be well down below that yet and we're trying to select the type of structure that will give us these velocities. The stream can handle -- the stream is handling now normal flows up above of 9 feet per second, so there's no question in my mind that if we reach that range, give or take a little, that we'll be in good--



in very good shape, because we're dealing with flows that are substantially larger than that which would occur.

Q. So you anticipate no real problem with scour or erosion in that area?

A. I anticipate no problem with scour erosion and if there were no dam there and a 100-year storm came, why, there definitely would be scour and erosion anyway, so that all we would be doing actually would be improving the situation 1001 percent.

MR. MANN: O.K. Thank you.

MR. DICKERSON: Mr. Florence, any objection to receiving that for what it's worth?

MR. FLORENCE: No, I don't.

MR. DICKERSON: Exhibit 36 is received into evidence for what it's worth.

(Exhibit No. 36, previously marked for identification was received in evidence, this date.)

MR. DICKERSON: Why don't we take about a two-minute break. Everybody can relax.

(Whereupon, a short recess was taken.)

MR. DICKERSON: O.K., ladies and gentlemen. O.K., ladies and gentlemen, let's continue.

MR. MANNA: O.K. I have several more questions that we've gone over.

BY MR. MANNA:

Q. First, as I had indicated on the low flow channel, we would like to have something like this but it presents one problem in the area that you're crossing -- that you cross with your outfall pipe. You only have approximately six inches cover in that area anyway and we would like to have a detail of this, however you're going to arrange it.

A. Can I see that?

Q. If you create a low flow channel you'll actually be exposing this pipe so provisions will have to be made to cover this anyway and perhaps abandon the low flow channel in that area.

A. All right. What we can do, I'll provide the detail. What we can do, of course, is go the section and raise one side of it.

Q. Again, please provide the regional office with the detail and Mr. Weber's office with the detail of



that.

A. No problem.

Q. Also this smaller pond indicated on several of the plans just upstream of the proposed impoundment, what is the status of that? We have no real awareness of this as being formally applied for.

A. It's in the study stage. It's been one of these 'off again, on again type of things as to whether we definitely want to put that pond in or not. We've made a study on it. I haven't completed it but considered it to be in sufficient form for submission. I don't know whether this particular point in time, I cannot positively say that we would be applying for it, but if we do, of course, we would come --

Q. So at this date it is officially non-existent.

A. Officially I would say it's non-existent, yes.

Q. O.K. Going back --

MR. DICKERSON: This -- excuse me.  
This "officially non-existent" pond --

MR. FLORENCE: There's a pond, as I understand it.

MR. DICKERSON: That's what I want

to find out. Is there a pond in existence or would it require a dam?

THE WITNESS: No, no, no.

MR. DICKERSON: Or would it have to be excavated or not?

THE WITNESS: No, no.

MR. FLORENCE: I'll get it. Let the record indicate that any testimony should come from those under oath rather than those --

MR. DICKERSON: Yes, you want to pick it up in the questioning and I'll hold the question. O.K. Press on.

BY MR. MANNA:

Q. Is this planned or is this not planned? Is this now existing?

A. It's -- I'm not aware of any pond existing in that particular location shown right there. There are some excavations in and around that area, not in the stream bed. I can only report from what I am working on, we had started to study a pond. We were not going to have a pond. We were going to have a pond. We were not going to have a pond. There is a possibility we will have a pond, and that's the way



it stands right now. I have a study on it but I have no knowledge of whether that -- once I get done with my plan, whether it will be approved by Heritage for submission to you people.

Q. What is the purpose of the excavation in that area?

A. I really can't say; I really can't say.

Q. I'm referring to the present excavation that looks considerably deep. It is holding water right now. It is off the pond, however, or off the stream, excuse me.

A. I think it probably started out as one of our silt traps. I can't say what the depth of it is right offhand. You know, I -- I'm not on the job eight hours a day. I'm in my office and I do get a chance to get out over the site, over to the site, excuse me, but I can't say any more than that about it.

Q. Regarding the construction of the impounding wall and the impoundment itself, how will this be staged? Will this be seeded before it is filled; can you tell me something about that, how you control the initial turbid water in it?

A. The turbid water that would be formed by drainage running into the pond?

Q. By filling in, yes, by filling up.

A. Yeah, we would seed it, you know, of course, realizing that while the area above the pond level will grow, the minute I start putting water in there a couple days later I won't have any grass left in down below but I would say that we're talking about the same type of thing that we were talking about in the relocation of the stream, the use of bales of hay or any other method which may be suggested to us in impeding any siltation that might come down through there. One other way we could effect that is by having a small sump down at the 18-inch structure. There's a small pipe that would be used for draining the pond, construct a small sump in that area, allow the first piece of siltation to occur and deposit there.

Q. You do not feel though that turbidity or siltation as a result of the filling or the first overflow or the first filling of this pond will be significant?

A. I don't feel it will be significant, no. I think we're going to be using these same procedures.



We'll be stabilizing the slopes; we'll be seeding them. Grass will be growing. We'll put our water in there. I expect for me to say that there would be absolutely no siltation whatsoever would be foolish. As a practical matter there will be. We will use every method possible to catch it and dispose of it.

Q. Well, after -- as this pond is being constructed, I assume the stream will be flowing in a new channel. It will not be staying in its present channel in the bed of the pond. Is that correct?

A. I'm sorry, I was --

Q. Will the -- will the stream flow through its present channel up until the moment that you close the gate or will it be flowing through a -- flowing through an excavated area of disturbed soil until it's filled ?

A. The method would be to lay a pipe in a new stream or a new location adjacent to the existing stream bed and water would be running through that pipe bypassing the stream -- the stream area or the dam area itself and then once the dam is completed, we would then plug that pipe and it would be no longer

in use and then the water would have to come down through its normal stream channel once again.

Q. So you're saying that there will be no -- no great velocities or no moving water over exposed surfaces, over raw surfaces during the fill, at the early stages of the filling of the dam?

A. No, it would be my intention to do everything possible to prohibit that.

MR. MANNA: O.K. Thank you.

MR. DICKERSON: Mr. Florence?

MR. FLORENCE: Yes. The qualification page?

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CROSS-EXAMINATION

BY MR. FLORENCE:

Q. Mr. Bibbo, in addition to the qualifications that you've set forth on the Exhibit No. 33 in terms of doing work for both private industry and certain municipalities, you have a substantial amount of experience with general contractors in construction and developers, do you not?

A. Yes, I do.

Q. In fact, in the area of Carmel, North Salem, Bedford, Somers and the environs, you represent



many if not a majority of these people, do you not?

A. I would say we represent many. I can't say a majority.

MR. DICKERSON: Come on, speak up.

Q. Would you say that that's the majority of your recent past efforts in terms of engineering is representing these developers and these people who make submissions to different municipalities for improvement of the land?

A. I do a substantial amount of planning and design for developers, yes.

Q. Well, certainly the -- your present position with North Salem and Patterson are really nominal in terms of remuneration, wouldn't that be a fair thing to say?

A. Compared to my total income?

Q. Yes, total operation.

A. I would say they would be nominal.

Q. And that the substantial part of it, that is the overwhelming portion of effort would be effort in work in relation to the development, private development?

A. I'd have to concede that.

Q. Now, in relation to the work you've done in the construction of dams up to this point in time, you did one, as I understand it, over in Lewisboro in the Wild Oaks development?

A. That's correct.

Q. Was that similarly or substantially the same kind of project as proposed in this particular proceeding?

A. It's an earth dam.

Q. Is it of the same size or is it of a smaller size?

A. It's about 15 feet in height, I would say, a few feet smaller.

Q. What about in length?

A. It's been a few years. I'd have to go back and check the plan.

Q. Would you agree with me that it's substantially shorter than this proposed project in this particular application?

A. I don't think I can possibly agree with you unless I would have an opportunity to check those plans.

Q. All right. That dam would drain a much smaller basin than we're referring to in this particular application also, would it not?



A. It's a smaller basin, yes.

Q. And is, in fact, it categorized in terms of the dam categories, not the same because of that, among other considerations, as this particular dam categorization?

A. As far as the intake structure is concerned, it is not a Class "B" structure.

Q. In relation to the dam that's referred to in the Amawalk, is that with relation to one of the -- in connection with one of the reservoirs?

A. That's the Amawalk-Shenorock Reservoir or Amawalk-Shenorock -- Shenorock Lake is what it is commonly known as.

Q. Shenorock Lake?

A. Lake Shenorock.

Q. All right, and that was done when?

A. A year or two ago.

Q. All right. And that was not the same category as we're referring to here either, was it?

A. It was -- the storage of waters in that reservoir far exceeded this one.

Q. Was that an "A" dam, "B" dam?

A. We had an existing structure there that was in

danger of eminent collapse. In fact --

Q. Eminent or imminent?

A. A little bit of both, maybe.

(Continued on page 839)



THE WITNESS: (Cont'g.) In fact, I can remember a conversation on that one with a -- somebody in the permit office, with DEC asking for some additional information. It had taken some time to get that approved and I demanded to know the man's name and he wanted to know why, and I said I wanted to know who to blame it on when that damn dam falls down. In fact, when Mr. Salvo from the New Paltz Office of the Department of Environmental Conservation came down to take a look at it, he said if he had known it was like this we could have dispensed with the plan and you could have proceeded under the emergency provision of the state law.

Q. In fact, that dam isn't an earth dam at all?

A. Yes, it is, with a concrete core.

Q. Concrete core? How is it keyed in? Is it keyed at the bottom for keying in concrete or do you know?

A. There are no adequate plans on that dam. That thing is so old that no one knows just really what's happening, what happened to it.

Q. But it is a concrete core?

A. It has a concrete core. I can't tell you what the reinforcing is, if any, in it. I can't tell you what

the foundation conditions were. It was something that was done in about 1926, '27, '28; about that time.

Q. In relation to the pond that's referred to at or near Gate 2. Are you familiar with the existence of the pond itself?

A. Gate 2?

Q. Gate 2, being the entrance to the applicant's parcel of land on Warren Street to the north of the structure, of the area proposed --

MR. DICKERSON: Mr. Florence, would you indicate the approximate location of what you are referring to on Exhibit 22? Off the record.

(Discussion off the record.)

Q. I've marked my recollection of the presence of Gate 2 or what I call Gate 2. It might be an improper reference.

MR. BLASI: Yes, it is. I don't know what you call it but it's not a gate.

MR. FLORENCE: Is there a roadway there? Maybe I can get that.

MR. DICKERSON: We'll refer to that geographic point on that exhibit as Gate 2 although any reference to gate might be accidental.



Q. Mr. Bibbo, are you familiar with an entranceway to the property on the east side of Warren Street to the north of the present area sought to be improved with a utility service?

A. Yes, there is an entranceway there.

Q. Is it in and about the area where I have indicated with a red marker on Exhibit 22?

A. Within an inch or within two, three hundred feet.

Q. And are you familiar generally with the location and the presence of the stream near that entranceway?

A. Yes.

Q. Are you familiar with the presence of a pond presently existent to the north of the area of that entranceway?

A. I think I answered that before when I said that I'm aware of an excavation there that started as a silt trap. I'm not aware of any further detail on it.

Q. And the silt trap was for what purpose?

A. Silt trap.

Q. Trap silt?

A. That's what they make them for.

Q. And where would that silt be coming from, new

construction to the north of that?

A. North and east of it.

Q. And that construction was occurring on the land of the applicant, was it, in here?

A. Yes.

Q. And in fact, are you familiar with the presence of a pipe or any other devices in that pond or that area for gathering water?

A. There is a couple of small pipes underneath that crossing. That crossing was there, in existence for many years.

Q. Were the pipes put in by the applicant, do you know, or were they there before?

A. No, those pipes were there before.

Q. Now, are there any vertical pipe in that area to your knowledge?

A. Not to my knowledge, no.

Q. The presence or absence of a vertical pipe couldn't be attested to by you at this time? Would that be a fair statement?

A. I don't know what it would be doing there.

Q. You don't have any specific recollection of its presence, of any pipe being present other than the



two pipes that you referred to as having pre-existed this application?

A. I've seen pipe laying on the job site. I can't, other than what I have designed or what I have been directly involved with, I can't give you any --

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Q. Did the applicant or did you prepare any application to create a pond up there?

A. Have I prepared an application?

Q. Yes, ever?

A. I said it's under a study stage.

Q. And that pond was created by fresh excavation, correct?

A. Well, you are calling it a pond. Now, my recollection is --

Q. That gathering place for water.

A. O.K., fine.

Q. The question was: Was it created by fresh excavation?

A. It was dug out to create a silt pond, to my recollection, in the beginning and not under my specific direction either.

Q. When did you first become associated with the applicant as the engineer to do the responsibilities that have been described as your responsibility at

this hearing?

A. I stated somewhere around the end of February, probably the beginning of March.

Q. What year?

A. '73.

Q. Would it be fair then to say that you weren't in any part of the location of this utility area or the site of the sewerage plant at the time?

A. No.

Q. When you came upon the scene you hadn't given previous service in relation to the location of that plant, is that correct?

A. That's correct.

Q. Had the stream been proposed to be located at the time that you came upon -- that you were retained, rather?

A. Had the stream been proposed to be relocated at the time I came on the scene?

Q. Yes.

A. The plant is in the area that it shows now. I don't recall whether they ever showed -- no, they couldn't have ever showed it, because we prepared the stream relocation plans.

Q. The answer would be no then?



A. No, what?

Q. No, it wasn't relocated at the time you were retained?

A. I can't recall whether he had a sketch outline or not. I said we drew up a set of plans for the stream relocation.

Q. All right. Did you do any work with relation to the outfall structure, and I think what that means, the pipe that runs from the sewer plant south towards Route 202?

A. Yes, we prepared the plan.

Q. And in that plan did you study any of the areas for the location of the sewage plant before preparing that outfall --

MR. BLASI: I object to that question.

Mr. Bibbo stated what he was engaged for.

MR. FLORENCE: May we have testimony --

MR. BLASI: Just a minute. Would you please let me finish my objection.

MR. FLORENCE: Any objection to what anybody stated for refreshing recollection of anybody I say is improper in form.

MR. DICKERSON: I'll hear his objection.

MR. BLASI: My objection is that Mr. Bibbo's testimony is clear. He was not engaged to design the sewer plant. Mr. McPhee has been testifying here for three days. He stated what he was hired for. Now, you are bringing in, trying to bring him into the design of the sewer plant. The question is improper.

MR. FLORENCE: It's a completely different question from what I asked.

MR. BLASI: You are going outside of the direct examination. That's what I am saying to you, and I object to it.

MR. FLORENCE: Cross-examination permits.

MR. BLASI: Cross-examination as to what he testified to.

MR. DICKERSON: Can you read back that question?

(The reporter repeated the question.)

MR. DICKERSON: Objection sustained.

MR. FLORENCE: I respectfully except, Your Honor, and secondly, I would state that the manner of stating the objection is really



recapitulation of testimony.

MR. BLASI: You are asking a conclusion.

MR. DICKERSON: Gentlemen, if you wish to rephrase the question to get to your point, please do so.

Q. Did you study any other sites in this application for the location of the outflow or the location of the plant?

MR. BLASI: Same objection.

A. I'm sorry.

MR. FLORENCE: Would you read the question again?

THE WITNESS: I know the question.

MR. DICKERSON: Please answer it.  
We'll get through it quicker.  
A. I did not study any other location for the sewage treatment plant.

MR. DICKERSON: Thank you.

Q. Are you familiar with the area surrounding this application, the area included in this application?

A. Am I familiar with the property?

Q. Yes.

A. Yes, I am.

Q. And you have walked this property so you are familiar with this property as a subject of the application, isn't that also correct?

A. That's correct.

Q. Now, are we accurate in stating that there is a drainage basin to the west side included as part of this application?

A. Is there a drainage basin existing on the west side? Yes, there is.

Q. And that's not serviced by the Brown Brook but by a tributary of another brook, is it not?

A. That's correct.

Q. What is that brook?

A. It's unnamed.

Q. What does it drain into?

A. It eventually drains into Plum Brook.

Q. Have you studied that stream?

A. Have I studied that stream?

Q. Yes, the tributary into Plum Brook.

A. In what relation?

Q. Into its size, its vertical drop, its ability to take drainage?



A. No. I've made no computations as to vertical drop. I know its ability to take drainage. It has a relatively short drainage basin running into that area. My main concern at the time that I was directed to submit for public hearing was the dam, relocation of the stream, and the outfall sewer.

Q. You are doing the drainage work for this applicant, are you not, storm drainage work when I refer to drainage?

A. Yes, I am.

Q. And as part of that retainer or that obligation you are planning the draining of the area that was serviced by that particular drainage?

A. Eventually I'll get --

Q. That stream.

A. Eventually I'll get into that as soon as plans are more firmed up for that area.

Q. You haven't done it yet?

A. No.

Q. Have you done the drainage for the area serviced by the Brown Brook, that is, which normally drains into the Brown Brook?

A. Yes, I have.

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Q. And you have provided drainage into that storm water?

A. Yes, I have.

Q. And there is also another drainage basin, is there not, to the east, including a portion of the property submitted in this application?

A. Yes, there is.

Q. And that's serviced by this brook we've been calling the unnamed brook, that is, it drains into that area?

A. It's another -- I suppose you would call it an unnamed brook. It's a result of the spring emanating from Summit Lake.

Q. Drains down into where?

A. Eventually drains into the subject property in the vicinity of the well area.

Q. And from there?

A. From there it crosses Route 202.

Q. Into a marshland?

A. Into another pond.

Q. Into another pond?

A. Right.

Q. Through that pond into that marshland?

A. I suppose there is a marshland down in that area. May I refresh myself for a minute?



Q. Yes, and from there where?

A. It flows into a pond and it shows marshland here adjacent to the City of New York reservoir, but it actually flows right into the reservoir.

Q. And you are referring to what exhibit, Mr. Bibbo?

A. Exhibit 23.

Q. Is your recollection refreshed? Having refreshed it with this map, is it your testimony the map is inaccurate in that respect, that the pond is flowing directly through that marsh area in a streambed into the Croton River portion of the Muscoot Reservoir?

A. What I am saying, it's my recollection that it runs on either 202 into a pond and from thence into a streambed, eventually into the Croton Reservoir. It shows some marshy area as a fringe of the reservoir. How much marsh is there, I can't say. It's not like I'm running first into a swamp of size and then into the reservoir. It just may be a very well defined creek in an area.

Q. In relation to the eastern side of that Route 202, would it be fair for me to say that there is no present development in that area, that is, it is a low lying flat area, fairly moist?

A. East of 202?

Q. Yes, on the east side where this stream goes into the pond and then the pond into the Croton River portion of the Muscoot Reservoir?

A. There is development south of it and development north of it.

Q. How far north?

A. Well, there is development known as the Stone House community.

Q. How far north is that?

A. Directly north of it, because I believe they use a portion of that pond for a recreation area.

Q. How about to the south?

A. To the south there is the Dean's Bridge community.

Q. That's about a quarter of a mile, half a mile south?

A. I can't give you a definite number. I could scale it off the plan if you wish.

Q. The Dean's Bridge community you are referring to is on Dean's Bridge Road?

A. Bonnie Drive, Susan Drive, Hunter Lane. I can't think of the name of the other streets but there is several developments in that area including Lake Purdy's on the other side.



Q. How big a basin does that stream drain, how many acres?

A. I don't have an actual computation. It's a relatively small basin.

Q. Do you have an estimate of it from your personal knowledge and your study of the area?

MR. BLASI: Mr. Dickerson has one better. It's smaller.

MR. DICKERSON: Would you like a slide rule?

THE WITNESS: I'll take the slide rule.

A. I'd say it's somewhere around four, five hundred acres.

Q. In order of magnitude, what would you say in comparing that unnamed stream, say, with the drainage basin of the Brown Brook?

A. About a third the size.

MR. DICKERSON: Speak up a little, please.

THE WITNESS: Approximately about one-third the size.

Q. And the drainage basin, the drainage area drained by the tributary of the Plum Brook?

A. I'd have to outline the area. I was able to do that here because apparently the drainage basin for that area seems to be outlined on this chart. I'd have to make a complete outline on here. I've made no study.

Q. Aside from your refreshing your recollection with Exhibit No. 23, do you have an opinion based on the work that you have done in the community over the years or your familiarity with the area of the size of that basin?

A. It would be very difficult. It's a huge -- the entire Plum Brook drainage basin is a huge drainage basin. To give you an estimate of what the portion--

Q. The tributary drains, actually that portion of the property through which this tributary runs into the Plum Brook is a calculable amount that doesn't include the whole of the Plum Brook drainage basin, isn't that correct?

A. Yes.

Q. And I'm referring specifically to the drainage basin that is serviced at least by surface runoff by this tributary that goes to the Plum Brook?

A. If you will permit me, may I take a minute to



mark it up?

MR. DICKERSON: Here, use a pencil.

Let's take a break for a minute or two.

(Short recess.)

MR. DICKERSON: Mr. Bibbo has marked in pencil on Exhibit 23 the approximate outline and labeled the approximate Plum Brook tributary drainage area.

Q. And that in comparison with the other two would rate how, that drainage area?

A. Well, quick computations show that the -- we call it the Plum Brook tributary drainage area, is about 600 acres. You get a thousand acres from my drainage basin for the dam, approximately 400 acres for the tributary to the Croton River, the unnamed brook as has been described before.

MR. DICKERSON: I think we're calling that for reference Question Mark Brook.

THE WITNESS: Question Mark Brook.

Q. Have you taken any flow measurements in any of the three streams?

A. No, I have taken no flow measurements.

Q. Have you walked the streams, all three of them?

A. I've walked the Brown Brook.

Q. Have you walked the stream, unnamed, emanating down Sun Lane, down to Route 202?

A. I know a good portion of it. I've been at the dam. I can't say I've walked it from stem to stern.

Q. Would you say you are familiar with maybe half or a third, a third?

A. Maybe about a third, 25 percent.

Q. You are most familiar with the area from Route 202 east back toward -- through the former Adams property? Is that the area of your familiarity?

A. My familiarity would take place with Summit Lake and its outlet, and then from the area immediately west of Route 100 and east of that toward the Stone House and Dean's Bridge areas.

Q. When you say Route 100 --

A. That's Route 100.

Q. Is it also Route 202? Let's use the same nomenclature.

A. Is it 202 and 100? All right. Let's call it 202 and 100.



Q. And in relation to your familiarity, your personal familiarity with the tributary to the Plum Brook, have you walked it or are you familiar with any portion of that stream?

A. A very small portion of it, because I'm more familiar with Plum Brook itself. Now, I'm giving away my trout hiding places.

Q. Would it be fair to say that you have not walked the tributary but you have some idea of where it comes in at the Plum Brook?

A. I've been on it on several pieces of property.

Q. How about this particular piece? Would it be fair to say you have not?

A. A portion of this particular property I have been on that tributary, yes.

Q. And that would be when you were back there in the northwesterly corner of the parcel?

A. May I examine that, please, sir?

Q. Sure.

A. If this is the property that was purchased from Raymond Shortino I have that here.

Q. That would be the portion of the stream that you can dash over with a red pencil.

MR. DICKERSON: Use X-marks over the area on Exhibit 22 with a red marker pen.

A. Yes.

Q. What observation did you have about the characteristics of the stream where you did see it there in relation to its size, flow, presence of water or absence of water?

A. I walked that property, the Shortino property, because Mr. Shortino expressed interest in developing it, and I walked it for road layout. I saw the stream. It's bounded on both sides by hill. There is a lower park area in the vicinity of the stream. There was -- the stream actually split to a couple of channels at that point and there was water in the brook. Other than that I have no further observation of the stream.

Q. Would that be prior to 1972?

A. (No response.)

Q. About what year, what time of the year, if you can remember?

A. It was prior to 1973 at least. It was not this part of the year. It was not in summertime. I would say it was more in the fall, but I can't



be sure. You know, I'd have to check the diary and records.

Q. Are you familiar with the area of the Brown Brook south of the subject property, that is the property subject to this application?

A. Yes, I am.

Q. In fact, you have made -- who owns it?

A. Immediately south?

Q. Yes.

A. Fire Department property.

Q. Beyond that.

A. Beyond that is the Sun Enterprises property.

Q. How far does the stream flow through the Firemen's property? What distance about?

MR. BLASI: I didn't hear that question, Mr. Florence. Would you mind repeating it?

Q. About what distance does the stream flow through the Firemen's property?

A. I couldn't -- I've prepared maps on that property and if your client has a map available I'll gladly measure it off that map. I'll give you to an exact dimension. I couldn't begin to say whether

it's 300 feet or 500 feet at this point.

Q. Would your estimate be that it's not more than three or five hundred feet?

A. Off the cuff, yes.

Q. What is the nature of the stream or the nature of the water characteristic on that property, if you know? Characterize the stream or what's there.

A. There is a stream.

Q. And what else?

A. There is a pond.

Q. And anything else?

A. Are we speaking on the Firemen's property?

Q. Yes, limiting your answer to the Firemen's property.

A. Yes, there is a stream that runs into a small pond. There is a drop of that pond and then the stream runs again.

Q. What type of a drop do you refer to?

A. The pond was built up. I would assume there is a drop there anywhere between 3 and 12 feet into the stream.

Q. Are you referring to the pond on the Fireman's property?



A. Yes.

Q. Do you have a specific recollection of this?

A. I have a specific recollection that there is a drop. I'm guessing very much so about the size of the drop. There is a two-pipe outlet structure, I believe, out of that pond.

Q. What's the profile of the pond imagining the -- not imagining, using your mind's eye to tell us what the depth of that pond is, if you know.

A. I have no idea.

Q. What is the size of the pond in area?

A. I have no idea.

Q. It's a lot less than an acre, is it?

A. I would guess it's much less than an acre, yes.

Q. More like 50 by 100, a hundred and some feet in its dimensions?

A. Possibly somewhere like 10,000 square feet, I would assume, maybe less than that even.

Q. Beyond that where does the stream go?

A. It eventually runs into the Sun Enterprises property.

Q. Is there anything in between the Firemen's property and the Sun Enterprise property, to your knowledge,

any other property that the stream traverses before it gets to the Sun property?

A. I'm trying to go on recollection. It may cross a portion of the school property. I'm not sure.

Q. Can you describe the stream in the area as it exits the Firemen's property and enters the Sun property?

A. Can I describe the stream?

Q. Yes.

A. You mean dimensions, width of it?

Q. Dimension, characteristics, depth?

A. No, I really -- I would assume, and it's strictly conjecture on my part, that it's approximately 6 to 7 feet wide, 5 to 7 feet wide, probably carrying about -- excuse me.

Q. I was motioning Mr. Weber while you were answering so I can get two things done at once.

MR. DICKERSON: Do you want to go off the record for a moment?

MR. FLORENCE: Yes.

(Discussion off the record.)



MR. FLORENCE: Will you mark this for identification?

MR. DICKERSON: Let's go back on the record.

MR. FLORENCE: It's stipulated, Mr. Blasi, or is it stipulated and agreed that --

MR. DICKERSON: So the reporter can hear it.

MR. FLORENCE: -- that Mr. Bibbo, during the luncheon time recess, will produce a copy of the map of the parcel to the south of the property subject to this application this afternoon, indicating the location, which map is already one produced by another party?

MR. BLASI: Subject to my inspection and subject to my right of cross-examination.

MR. FLORENCE: Fine.

MR. DICKERSON: And subject to your payment of the cost.

MR. FLORENCE: Yes, up to 50 cents.

(Remarks off the record.)

MR. BLASI: I want to see what the map is, in other words, before I take any position on it.

MR. DICKERSON: I'm trying to alleviate the problem of getting it here. Now, whether it's admitted or anything else --

MR. BLASI: That's the point, that's the point.

MR. DICKERSON: O.K. Mr. Bibbo will bring it and Mr. Kipp will pay for it and whether we accept it or not, we'll leave open. Proceed, gentlemen.

BY MR. FLORENCE:

Q. Have you done measurements of the --

MR. DICKERSON: O.K., gentlemen.

Q. Mr. Bibbo, have you studied the flows in the Brown Brook or in any other place along the Brown Brook on the subject property?

A. Have I studied the flows in the Brown Brook? I've studied the flows in the Brown Brook inasmuch as I've taken cross-sections of the Brown Brook, estimated its flow at the time and estimated its potential capacity.

Q. All right. Now these flows that you say that you've estimated, you estimated by your observation, is that it?



A. Estimated by using the cross-section of the brook, the channeled slope, selecting a coefficient known as the N factor, computing my area, my related perimeter that is in the Manning Formula, and arriving at an end conclusion.

Q. Well, the N factor and the Manning Formula is simply a table in the back of the book. You simply pick it off depending on however you want to characterize the side of the stream?

A. You pick it off according to the objective as to what you think the stream looks like.

Q. Whether it's sloping, straight, curved?

A. More to it than that.

Q. What the material is?

A. No, no, you have to look at the reaches, you have to look at the nature of the bed. You have to see whether it's stony, whether it's smooth, whether it has deep pockets in it, runs, ripples, et cetera, et cetera.

Q. Now, you're preparing the drainage for -- or the storm drainage plan for the area to the east that would flow into the area of the region serviced or drained by the unnamed trib... the unnamed brook?

MR. BLASI: Can we fasten this down a little more? We seem to be wandering regions to the east, to the west. We have some exhibits here. It would occur to me that the questions are vague.

MR. FLORENCE: I suppose they're vague if the witness can't answer them. Whether or not they're vague in your judgment, I think --

MR. BLASI: I submit they're too vague.

MR. DICKERSON: Let's use a uniform terminology for the hearing that we all understand.

MR. FLORENCE: We have.

MR. DICKERSON: Tributary to Plum Brook, Brown Brook and Question Mark Brook.

MR. FLORENCE: And Question Mark Brook.

MR. BLASI: That's what I'm talking about.

MR. DICKERSON: O.K. Go.

BY MR. FLORENCE:

Q. Did you prepare a plan for storm water drainage, drainage of storm water in this plan, from the area drained by the unnamed brook?

A. Question Mark Brook?

Q. Yes.



A. I have not computed the drainage through areas there, yes.

Q. Ultimately, will you have it?

A. That's correct.

Q. And it's your plan presently to put the storm drainage into that brook?

A. It's my plan as I stated before, to -- I have provided the drainage basins so that the drainage that flows there now overland, whether concentrated or not, only that drainage will flow through that tributary.

Q. The answer is yes?

A. It certainly is.

Q. Now --

A. I think. I don't remember the question.

Q. Is the storm water going to go into the brook?

A. Definitely.

Q. In the area that it normally drains?

A. That's correct.

Q. Now, in relation to the character of the land to the south owned by Sun, what size of -- withdrawn. Are you familiar with the amount of land that Sun owns in the area south of the applicant's parcel through which

the brook runs, Brown Brook runs?

MR. BLASI: As of what date?

MR. FLORENCE: As of today.

MR. BLASI: O.K.

A. I'm familiar with it as of the date that I prepared that map that I'm to bring in this afternoon.

Q. And how much was included at that time?

A. Approximately 300-and-change acres.

Q. And about what distance on that property or along that property does the Brown Brook flow?

A. I can answer that much simpler and much more correctly with the map in front of me.

Q. All right, we'll reserve the question for the afternoon. Have you been on the land itself, the parcel itself?

A. Yes, I have.

Q. All right. Walked it extensively, have you?

A. A good portion of it, yes.

Q. How would you characterize the majority or the major -- what is the major characteristic of that land in the area where the brook flows?

A. The brook runs through an area which is swampy and low. It then runs -- it runs through an area



which was composed of bank run sand and gravel at one time. It runs through -- from there through a series of small ponds. It runs into a larger pond off the property.

Q. Would you say that the major characteristic of the area including the marshy area and the area immediately to the south is flat?

A. Basically the area through which the stream runs is, except until it gets to that point, is flat, yeah.

MR. FLORENCE: I -- Mr. Examiner, I would like to stop at this point only because the next series of questions would really deal with answers that could be better given with the presence of the map.

MR. BLASI: I have no objection.

MR. DICKERSON: I think we'll break for lunch for one hour. I'd like to resume promptly in one hour at a quarter after one.

(Whereupon, at 12:15 P.M. a luncheon recess was taken until 1:15 P.M.)

AFTERNOON SESSION - 1:25 P.M.

MR. DICKERSON: Ladies and gentlemen, we'll continue.

LEONARD J. BIBBO,  
was recalled to the witness stand and testified further as follows:

MR. DICKERSON: Mr. Bibbo was being cross-examined by Mr. Florence and I think we'll pick up at that point.

MR. FLORENCE: Mr. Bibbo -- may I mark this particular map or one of these two maps for identification, Mr. Hearing Officer?

MR. DICKERSON: Exhibit No. 37 for identification.

THE WITNESS: Mr. Dickerson, may I remove my coat?

MR. DICKERSON: Please, will all the gentlemen take their jackets off if they feel more comfortable. We'll have no sweatbox tactics here today.

Exhibit No. 37 for identification is a map entitled "Road Circulation and Rezoning Plan" for C and R Realty Corporation and Sun Enterprises, Ltd.



and --

MR. FLORENCE: We're expanding the hearing.

MR. DICKERSON: -- prepared by Bibbo Associates, Consulting Engineers, bearing a date of April 5th, 1971.

(The map described above was marked for identification as Exhibit No. 37, this date.)

BY MR. FLORENCE:

Q. Mr. Bibbo, this map was prepared by your firm, was it not?

A. Yes, sir.

Q. And does it accurately or did it at the time accurately reflect the area referring to the pond, to the wetland area and to the stream to the north and south of that wetland area that we're referring to here as Brown Brook?

A. In what regard?

Q. Does this map accurately -- accurately depict its presence or its existence to the north and south of this pond and does it accurately depict the existence of the pond and the wetlands area here?

MR. BLASI: As of what date, please?

MR. FLORENCE: As of 5/71, April 1971

-- no, that's May.

A. It's a pond that was sketched on by us and it's a pond that's shown here to the best of my knowledge, a fairly accurate location, yes.

Q. I misspoke in my qualifying question. This was actually done in April?

A. April, yes.

Q. April 1971.

MR. DICKERSON: Dated April, yes.

MR. BLASI: I don't understand the question. Are you asking if the map in its entirety is correct?

MR. FLORENCE: No, I'm not.

MR. BLASI: What are you asking specifically?

MR. FLORENCE: Re-read the question, please.

MR. DICKERSON: Please.

MR. FLORENCE: The question is as I asked it and it's already answered.

MR. BLASI: Now, let's hear the question. I didn't hear the question and I didn't hear



the answer.

MR. DICKERSON: O.K. Would you please read it back, Pauline?

(The pending question was read by the reporter.)

MR. DICKERSON: Shall we start with Brown Brook?

BY MR. FLORENCE:

Q. Is Brown Brook accurately depicted as of April 1971 on that map?

A. Let me -- I've got to make a statement here. This topography was taken from the maps compiled by the City of New York 400 scale topography. They are generally fairly accurate in location as compared to what we would call the Coast and Geodetic Maps which are 2000 scale. These are 400 scale, contour intervals of 10 feet, and within that relationship -- scale -- contour interval, is a fairly accurate depiction of the location of the stream.

Q. All right, and its presence? As well as its presence?

A. That there is a stream.

Q. Yes.

A. Yes.

Q. All right. Now, the question is how far does that stream traverse the property of Sun Enterprises, what distance, your best estimate, if I may ask you for it.

A. Well, Sun Enterprises is fairly extensive holdings. Let me give it to you right off of the bat. It's scaled here as being approximately 3,200 feet.

Q. Now, does that map also accurately reflect the elevation, to the best of your knowledge, of the Port-Saia Pond to the north, or can you identify it on this map?

A. I can identify the pond.

Q. All right. Can we put a "P/S" in it with blue pen?

A. (Witness marks exhibit.)

Q. And does that, as of that particular date, reflect the elevation -- accurately reflect the elevation of the wetland about the reservoir of the pond that's noted there on that map?

A. You're referring to the wetland on the Kipp property, on the Sun Enterprises property?

MR. DICKERSON: Can we indicate the pond to which you're referring so we can have some references?



MR. FLORENCE: How about putting a red circle around the pond and then we'll use another pen to circle the wetland and then we'll play darts.

MR. DICKERSON: We've got green and black left.

THE WITNESS: All right, the pond --  
(Witness marks exhibit.)

MR. DICKERSON: The witness, on Exhibit 37, has encircled a red area which is labeled "70- to 80 million gallon pond," said pond being generally located south of Route 202 and the Somers Central School.

THE WITNESS: Now, you wish me to outline the --

Q. The wetland area. Is that -- does this map accurately depict as of that date the wetland area? Let's start with that first.

A. Again within the relationship that I stated before, yes.

Q. So the answer would be fairly accurate anyway?

MR. BLASI: No, he has qualified that. I don't want you to repeat an answer differently than he has given. He has qualified it.

MR. DICKERSON: O.K.

(The witness marked the exhibit.)

THE WITNESS: On the property, right?

5-2-1

Q. Could you give a judgment based on the scale of how many acres constitute the wetland area, either with your --

MR. DICKERSON: Let the record show while the witness is calculating the area that the wetland area has been marked or outlined in green marker pen on Exhibit 37.

A. You have the answer?

Q. No.

A. All right, then please don't prompt me. 39 acres, roughly.

MR. BLASI: I didn't hear that.

THE WITNESS: 39 acres, roughly.

Q. Of that, how much is pond, your best estimate?

A. About nine, nine and a quarter acres.

Q. All right. Would it be fair to summarize then by saying that we've got about nine acres of pond and 30 acres of wetland?

A. Roughly.

Q. Do you know anything about the profile of the pond



A. I prepared a plan once showing that that pond was approximately 50 feet deep or is to be excavated to a point 50 feet deep. I don't know whether that was ever done or not.

Q. Do you know what its profile was prior to the making of your plan, the depth of it?

A. I received measurements from the owner at the time that stated it was about 50 feet deep.

Q. All right. Now, in relation to the soil or the texture of the soil, whatever the soil is made up of around the pond, do you have an opinion about that based on your observations of being on the land?

MR. BLASI: I'm going to object to that as not being proper cross-examination. It's nothing that he testified to on direct. I let him go so far as to identify some of these features and do some of these things but from here on it's a -- Mr. Florence, you have your own engineer, you have your own experts. If you want to prove your affirmative case by my engineer, I object to it. Not proper cross.

MR. FLORENCE: I submit that I'm not limited on cross-examination, that this is, number one, not a trial; it's a hearing. Number two, this

witness has been on that property and to the extent that he may answer the question, I submit that it's proper to ask the witness.

MR. BLASI: You may call him as part of your case. If you want to call him later and pay him as an expert witness or do whatever you want at that point, that's proper, but it's not proper cross-examination.

MR. FLORENCE: Part of the hearing is to find out what effect this --

MR. DICKERSON: I'm going to split my ruling. First of all, I'm going to sustain the objection. I'm going to ask you to rephrase the question to be a little more specific as to ask for descriptions of things observed and matters of that sort rather than the way that the questions were phrased.

MR. FLORENCE: O.K.

Q. In relation to the area where the Brown Brook traverses the Kipp property near the pond, will you tell us where it goes?

MR. BLASI: I'm going to make the same objection. It's not on our property. It's on his



property.

MR. DICKERSON: I'm going to overrule the objection insofar as we're talking about the geography of the downstream of the project because I have to determine the effect on the stream of the project and in order to do so, I have to find out what's down there.

MR. BLASI: O.K.

MR. DICKERSON: Now, as to interpretation of soil pipes and things like that I will entertain any further objections and I'll call them as I see them, but a general description of what's down there, if the witness can answer it, we might as well get it now. We'll get it sooner or later.

THE WITNESS: I'm sorry. Would you --

(Continued on page 880)

Q. Does the stream go by the pond and if so in what proximity to the pond?

A. The stream, according to this plan and to the best of my knowledge, traverses the right side or the easterly side of the pond at a distance of about 400 feet.

Q. What is the nature of the soil, if you know, between the pond and the stream?

MR. BLASI: Objection. I object to that question. More than a geographical feature.

MR. FLORENCE: Certainly deals with the percolation, if there is any, and the percolation certainly has a lot to do with what will occur to that downstream pond in the event that this application is successful.

MR. DICKERSON: Let me interrupt here and ask three questions.

You said that the stream is 400 feet east?

THE WITNESS: Approximately.

MR. DICKERSON: Of the pond?

THE WITNESS: That's correct.



MR. FLORENCE: Through a wetland.

MR. DICKERSON: On the edge of a wetland, if we can be a little more precise, as the exhibit is held up in front of me.

And from your observation the surface material from the stream to the area of the pond was marshy?

THE WITNESS: Marshy area.

MR. DICKERSON: Swampy area?

THE WITNESS: Yes.

MR. DICKERSON: Sodden area?

THE WITNESS: Generally.

MR. DICKERSON: O.K. Let's go from there. It describes the feature of the land.

Q. Now, could you describe the degree of elevation change from where the stream enters the Sun property to where it enters the first pond on the Sun property?

A. I can't accurately describe it, because I see an area here in the plan. I see two elevations that are shown for a pond, one on the Port-Saia pond which has elevation 236 and an elevation of swamp which is 235, and I don't think that's a physical possibility. There might be the bottom of some sort of a pond, because

I know that that pond before it crosses Route 202 drains over a fall and through there through a boxed culvert, another fall, into another pond, which has, as I erroneously stated this morning, 6 to 8 feet drop. It's somewhere in the vicinity from the water surface to the water surface of the stream another two to three feet drop, at least. Here they show one foot difference. I know from my own observation that it can't possibly be true.

Q. From your own observation rather than that of the map will you tell me what you observe about the level from the exit of the Firemen's pond to the entrance to the first pond on the Kipp property.

A. I don't have any observation.

Q. Is it fairly level?

A. I can only describe fairly level in terms of feet of drop and I don't know feet of drop.

Q. Does that map help you in any way to determine whether there is any feet in drop?

A. Well now, I see a general elevation of 240 in and around the pond area. Again, subject to its accuracies. I see a spot elevation of 235 down by the pond. It would appear that there would be on the



original ground surface at least 5 feet, possibly now maybe with the pond being raised a few feet more.

Q. The pond I refer to is not too -- I referred to the elevation of the stream at the exit of Firemen's Pond to the elevation of the stream at the entrance to the first pond on the Sun Enterprises property. Would you qualify your answer from the last answer you just gave? I think you may have misunderstood my question in your answer.

A. What I am saying is I see in the vicinity of what -- I have to hold this up, your Honor -- just south of the Port-Saia pond is a piece of property known as the Firemen's pond. It's not marked so but it is to my knowledge. It is the Firemen's pond or Fire Department property. There is a contour interval shown in there representing elevation 240. There is a spot elevation in the vicinity of approximately 200 feet away from the pond showing elevation 235.

Q. You are referring to the pond behind --

MR. DICKERSON: Let's circle the spot elevation in a black marker. On Exhibit 37 the spot elevation just referred to will be circled with black marker pen.

THE WITNESS: All right. I was referring apparently -- according to the attorney here I was referring to the wrong pond. He is asking me a question down here.

Q. The pond behind the 19th hole.

MR. DICKERSON: For the record to be clear, circle the pond.

THE WITNESS: The spot elevation that I did refer to is circled in a black marker pen.

MR. DICKERSON: Fine.

Now, Mr. Florence, if you will indicate to the defendant the pond with which you are concerned we will cross-hatch it additionally, in black marker pen.

(The witness complies.)

Q. Do you know the depth profile of that pond you just cross-hatched with black?

A. I have no idea.

Q. Did you provide with your application for a permit to construct the dam any descriptive information of the character of the downstream area?

A. Did I supply it? No.

Q. I didn't hear your answer.



A. Did I supply it? No. The answer is no except for my drainage study.

Q. Is that one of the requisites of Question 14 of the application?

A. Yes, it is.

Q. Are you personally familiar with the area of the terrain? Are you personally familiar with the terrain on either side of the Brown Brook as it traverses the Sun Enterprises property?

A. Yes, I am.

Q. And are you familiar with whether or not it's been altered in any way over the last ten years, the terrain, the surface?

A. Yes, it has.

Q. In what manner?

A. Gravel excavation.

Q. And what is the result --

MR. BLASI: I didn't hear that.

THE WITNESS: Gravel excavation.

Q. And what is the resultant profile of the area where the stream traverses the Sun Enterprises property?

A. There has been a big flat area created there.

Q. And that's in existence today?

A. Yes.

Q. Would you have an estimate of the size of that flat area?

A. No.

Q. A rough estimate? More than 50 acres?

A. I've been through the property. If you wish, I'll make a computation for acreage.

Q. Well, rather than trying to take it off of the map, I just wondered if you had a rough idea of the size of that flat area or would you like to outline it?

MR. DICKERSON: May I interrupt for clarity? This flat area is not depicted in the contours on that map. With a red marker pen, using a cross-hatching, would you indicate the area that has been changed from that depicted on that map? Approximate.

(The witness complies.)

MR. DICKERSON: The witness has indicated on Exhibit 37 with diagonal red lines the area where the topography depicted on the map has been changed. Take a break for a minute.

(Short pause.)



MR. DICKERSON: We're ready to continue. Do you have an estimate, Mr. Bibbo, of the approximate size of the cross-hatched area constituting the level spot, a portion of the Sun Enterprises parcel?

THE WITNESS: No, I don't.

Q. Give me your best estimate, please.

MR. BLASI: If you are able to.

A. It's not a matter of whether I'm able to or not, but I'm getting to the point here where I'm sitting here doing computations for him and it's getting a little bit much; that's all. I don't mind doing it, but you have your own staff and your own engineer and go ahead and do it.

MR. BLASI: I must press my objection, Mr. Examiner. I don't think that this is a proper part of cross-examination. He testified to certain things, geographical situations, yes, but now these are man-made things. This man is in the excavating business according to the questions and answers that have been given here. What are we supposed to do, get involved in the quantities of the excavations? I don't think it's a proper question.

MR. DICKERSON: The only thing I wanted

to determine is the character of the land south of the project insofar as it will be affected by the project, insofar as in relation to the stream. I think we've got that pretty well scaled out. Do you want to answer the question on the estimate? I'll permit you to do so. Then we'll continue on to other matters, I hope. We know what's downstream of the dam. What do you need, a slide rule?

THE WITNESS: Yes, please.

Mr. Examiner, I don't mind doing it but as we were standing here before and I was estimating the property and I came out with 39 acres, as I was about to say it he came out with 40 acres. He knew the answer just as well as I did. You could give me the answer and say is that just about right and I'll say yes. You are making me do all this for nothing.

MR. BLASI: I'm going to direct him not to answer it.

MR. FLORENCE: I'll ask for a ruling.

MR. BLASI: We will produce it some other way in this record. But it's not part -- it's not a correct or proper cross-examination. We can



go back to what he testified to on direct. We've given all the dimensions downstream.

MR. FLORENCE: I beg your pardon. You have not.

MR. BLASI: If there are some other physical features, fine. I think the Department of Environmental Conservation is well aware of it or what is below it. We could go all the way down to Yonkers if we had to.

MR. FLORENCE: If the stream went down there, that would be your responsibility.

MR. BLASI: Absolutely not.

MR. DICKERSON: Sustained.

MR. FLORENCE: I respectfully except. I would like an answer to the question.

MR. DICKERSON: Noted.

Q. What provision has been made, Mr. Bibbo, for the downstream owners of this stream as a result of the alteration of the stream both by reconstruction and the construction of the dam?

MR. BLASI: I object to the question. I don't think that it's a proper question on cross-examination. I don't know what you mean by 'what

provision." Are you talking about damages?

MR. FLORENCE: I'm asking the question.  
If he doesn't answer the question --

MR. DICKERSON: Mr. Florence --

MR. FLORENCE: If he doesn't understand  
the question I will rephrase it for him and not for  
you, sir.

MR. BLASI: I object. It's a vague  
question, improperly framed.

MR. DICKERSON: Would you take it  
piece by piece, please? Are you referring to the  
derrick construction, to the construction, to  
channel widths, or what?

Q. Following the completion of the proposed construction --

MR. DICKERSON: As previously outlined.

Q. -- as you have already outlined, what provision  
have you made for the downstream owners on that stream?

A. In my design of my drainage I took into account  
possible excess water, if any. I've made count to  
retain it on our own properties. It is my opinion  
that there will be no damage nor excess water under  
normal conditions for any downstream owners. I might  
point out also that in my familiarity with this



property -- you haven't asked me this one and I will answer it -- there is a haul road which runs across this property which has two small culverts in it, which I have observed in times of rain actually backing into the swamp itself. That's on the Sun property.

MR. FLORENCE: I move to strike the testimony as unresponsive.

MR. DICKERSON: Nothing is stricken from an administrative record, Mr. Florence.

MR. FLORENCE: However, answers which are not responsive are either included as part of an examiner's information or they are not.

Q. Now, in the design of the dam, Mr. Bibbo, did you take into account certain prerequisites in terms of engineering form in designing that dam? Aren't there certain engineering prerequisites in the design of a dam?

A. Yes, there are.

Q. And the reference to those prerequisites is made in several texts, is it not?

A. Yes.

Q. At least one?

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6/2/2

(Leonard Bibbo)

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property -- you haven't asked me this one and I will answer it -- there is a <sup>Paul Road</sup> Hall Road which runs across this property which has two small culverts in it, which I have observed in times of rain actually backing into the swamp itself. That's on the Sun property.

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A. Yes, there are.

Q. And the reference to those prerequisites is made in several texts, is it not?

A. Yes.

Q. At least one?

A. Yes.

Q. And you are familiar, are you not, with the United States Department of -- I think it's Agriculture, Bureau of Mines -- let me see if I have it right, the Department of the Interior, the Bureau of Reclamation, in the design of small dams?

A. Yes, I have that manual.

Q. Would you refer to it, please, just for a moment?

A. To my manual?

Q. Yes, the manual. It will be much easier, much quicker.

And you recognize that as an authority on the subject of the design of small dams?

MR. DICKERSON: To get the record clear, you are referring to the United States Department of Interior, Bureau of Reclamation, book, Design of Small Dams, published by the United States Government Printing Office, 1965?

MR. FLORENCE: 1965 it is.

MR. DICKERSON: Thank you.

THE WITNESS: I have the '61 edition here.

Q. All right. Do you recognize the '61 edition as an



authority on the subject?

A. I recognize it as one of the manuals to be considered in the design of a dam, yes. There are many shoulds and shouldn't's and may's and may not's in the manual.

Q. I direct your attention to page 7 of this manual and I'll ask you the following questions. In the second paragraph under Section 18, the outline of investigations.

A. Yes?

Q. Under A, Subdivision 6, did you gauge the stream and sample it or have sample stations and meteorological stations, and did you conduct any tests pursuant to the stream gauging or the sample?

A. It's not required to sample or gauge a stream.

Q. Would your answer be no, you did not?

A. I did not gauge a stream, no.

Q. With respect to B on that same page, the hydrological data, do you have stream flow records including daily discharges, monthly and peaks?

A. There are no records on that by myself, the County of Westchester, by the United States Government, by the State of New York.

Q. Would you say your answer is no?

A. Yes.

Q. Do you have stream flow and reservoir yield?

A. I have information telling me what the major storm of this entire area was.

Q. Aside from that, do you have stream flow?

A. There was no stream flow data. I even checked the United States Government Geological Survey. There was none available.

Q. The answer would be no?

A. Yes.

MR. BLASI: The answer is the answer he has given. I object to counsel now qualifying it or characterizing it.

Q. Project water requirements --

MR. DICKERSON: Objection sustained in this case. Don't repeat the answer.

MR. FLORENCE: All right.

Q. Project water requirements including allowances for irrigation and power deficiencies, conveyance losses, re-use of returned flows and stream releases for fish, dead storage requirements for power, recreation



and fish and wildlife; any studies on that?

- A. This is not a dam in a sense that it's storing a reservoir where these things would be required. This is a small pond, not necessary to be constructed, can be eliminated, with no effect on this project whatsoever. It's a pond that we wanted to put up there for purposes of amenity, period.

- Q. Would the answer be that you have not got those?

MR. BLASI: I think he's answered the question.

- Q. Would the answer be that you have not got those?

MR. BLASI: I think he's answered the question.

MR. FLORENCE: I didn't understand the answer.

MR. DICKERSON: He didn't specifically in this case. I'm not going to ask him to be specific on that whole answer. I also recognize its significance.

THE WITNESS: The answer was no.

- Q. Have you done the sedimentation quality studies including sedimentation issues and the analysis of dissolved solvents on this water?

A. No.

Q. Have you done data on ground water tables in the vicinity of the dam site in the vicinity where the proposed pond is to be constructed?

A. No.

Q. Have you studied the water rights including any -- I'll edit question 7 in this respect -- have you studied the water rights of any individuals, of companies or subordination of rights of downstream users?

A. No.

Q. On the following page of the text, have you done monthly temperatures, rainfall and storm intensity studies?

A. Let me simplify this whole thing for you. There is a major portion of this that does not apply and has no purpose or effect on the creation of this dam, and I tell you what, I could just as soon have put a large culvert underneath that and it would have been classified as a road crossing. It would have been the same base structure, earth fill, and not have been classified as a dam at all.

Q. As I understand it, you are going to put this dam



up, Mr. Bibbo, is that correct, and it's in pursuance of that?

A. If you rather I didn't, we can withdraw that one too.

MR. DICKERSON: O.K., gentlemen.

Q. I'm not here to create the problem.

MR. BLASI: Let's not have an argument.

MR. DICKERSON: I think there is a certain obvious technical factor. There are dams and there are dams. Big ones and little ones. If Mr. Florence wants to run down what points that were or were not considered, I will permit him to do so. I will permit the witness as an expert witness to qualify his answers and I will state for the record I recognize the significance of the scope of this dam with respect to the entire list of questions that were being presented. Press on, if we can.

THE WITNESS: I apologize for my outburst.

MR. DICKERSON: Let's get on with the questions and answers.

Q. Are there any geological reports by any qualified geologist of this area proposed to be dammed up including the dam itself?

A. I've made soil tests of my own.

Q. What ground water observations have you made in relation to this property prior to any changes?

A. Ground water table in the vicinity of the stream?

Q. Right.

A. The ground water exists to a point below maybe 5 to 6 feet below the depth of the surface.

MR. DICKERSON: Would both gentlemen please speak a little louder so everybody can hear?

Q. Have you taken any photographs showing basin and character of the land prior to the proposed change?

A. I've taken no photographs.

Q. Now, in relation to the dam itself, do I understand that the thickness of the dam, that is the north-south dimension of its base is to be about 170 feet?

A. Roughly 160, 170, yes.

Q. And the top of it is to carry a roadway, is that correct?

A. That's correct.

Q. And you have a proposed sequence for the construction of that dam?

A. I do.

Q. And is that listed on any of the exhibits?

A. No, it is not.



Q. Is that part of this application?

A. Is it required?

Q. I don't know.

A. I don't know.

MR. DICKERSON: He said that he didn't have it, and you ask is it a part of the application. Do you want to rephrase that question for clarity?

Q. I mean, is it included as part of your application of papers submitted to date?

A. No, and there is a reason for it, if I may be permitted. We propose to put up a dam. We proposed, actually we were talking originally of some sort of a drainage structure where we could incorporate water behind it and we proposed this configuration and as has been our practice we have submitted this to the State so that we may meet with them. Their guidelines contain shoulds and should not's, not in many cases, some of them musts and must not's. And it has been our practice with every practice that involves the governmental agency, we prefer to outline that project, then sit down with them and go over in detail with them all the necessary requirements, their preferences, our preferences, reach a meeting of the minds, and come out

with a design that is best for all. And that's the way we have proceeded on this particular application.

(Continued on page 900)



BY MR. FLORENCE:

Q. In this particular application, would it be fair to say then -- in this particular application, would it be fair then to say that whatever will happen with respect to the design modification or the construction process will happen following this hearing?

A. I didn't understand you, no. Could you state that again?

Q. My understanding from your last answer is that you have not yet sat down with the State Department that would be appropriate in the circumstances to discuss and for them to make certain requirements with relation to the sequence of construction or the type and nature or character of construction of this dam?

A. We've been sitting down all along ever since the date of that submission.

Q. Which was yesterday or following the last date of our last hearing?

A. No, even prior to that. Those plans were not -- well, they were delivered to the New Paltz office. From there they were sent up to Albany. The gentleman who was to review them was on vacation for a while. He got a chance to review them. When he got

back, he gave me a call. I drove up to Albany; I sat down with the gentleman. The man who is the reviewing agent made a trip down here --

MR. DICKERSON: Let's go off the record for just a second, if I can interrupt you.

(Discussion off the record.)

MR. DICKERSON: O.K. Let's go.

Q. Would it be a fair summation of this particular --

MR. DICKERSON: I interrupted Mr. Bibbo.

MR. FLORENCE: All right, go ahead and finish your answer.

MR. DICKERSON: Did you have anything further to add?

THE WITNESS: Yes. I don't remember what I was saying.

MR. FLORENCE: You said something about going to New Paltz and Albany and --

MR. DICKERSON: You were talking about the reviewing agent --

THE WITNESS: Yes, the gentleman from the Reviewing Office, specifically Mr. George Koch, who has been to my office, we sat down and specifi-



cally discussed drainage. On that basis we did another drainage analysis because he was basing his analysis on the Soil Conservation method. We did another analysis or I did another analysis based on the Soil Conservation analysis. We discussed the inlet structures. I've been on the telephone with both he and John Stallmer. We've babied this project right along, discussing these things --

Q. To date --

A. -- and coming out with so far what we think --

Q. To date, neither the state agency nor your own office has a specific report as to the sequence of construction of the dam?

A. I've discussed this with them, yeah. Now, I intend to do it and I think I stated this here before.

Q. Is there any part of this application which discusses that? I don't see it and I'm just asking to shorten the question.

A. No, I don't think it does. I'm not sure.

MR. BLASI: Mr. Examiner, I believe there was testimony to that effect this morning if I recall it correctly.

MR. DICKERSON: He outlined certain

steps that he proposed.

MR. BLASI: Yes, yes.

MR. DICKERSON: But that's as far as it goes at this point.

MR. BLASI: Yes.

MR. DICKERSON: O.K.

BY MR. FLORENCE:

Q. In relation to the material which is to be used in the construction of the dam, do I understand that it's A-1 or A-2 plastic?

A. Yes, sir.

Q. All right, and do you know what the characteristics of that earth are when exposed to water or moisture?

A. A-1 or A-2 plastic?

Q. Yeah.

A. Stable, fairly stable as long as it's not on steep side slopes.

Q. It's affected by frost, is it?

A. If it's compacted properly, not materially.

Q. Well, is there any sequence of -- in this application that talks about compaction as part of this application to date?

A. Do you have my copy of the dam plans?



MR. DICKERSON: The large folded bundle in your right hand.

THE WITNESS: This one right here, yes, sir.

MR. DICKERSON: This is the revision (indicating).

THE WITNESS: All right.

MR. DICKERSON: Exhibit 34 consisting of three sheets is the revised plans -- excuse me, are the revised plans.

THE WITNESS: On Exhibit 28-B, going back to the original plans, the original submission, I stated on there that "all fill used in constructing the dam shall consist of selected sand-silt or sand-clay soils, conforming to P.R.A. classifications A-1 or A-2 plastic.

"Placement: All topsoil and other unsuitable materials shall be stripped from the dam site prior to placing embankment fill.

"All fill shall be placed in layers not greater than four inches in thickness, with maximum size of particles limited to three inches. New fill shall be thoroughly compacted and benched into

the existing embankment to provide a thorough interlock. The minimum width of bench shall be the width of the compactor used. Compaction shall be accomplished by a minimum four complete passes with an approved smooth-wheel vibratory roller. The engineer in charge of construction shall provide thorough and continuous testing to insure minimum dry density of 95 percent of maximum density," and I'm sorry, I'm going too fast.

"The engineer shall field control the moisture content of all backfill material."

And I'll add one thing. On the second plan there was an additional note placed on it: "All materials and methods employed in the construction of this dam shall be in accordance with the Standard Specification Construction Materials of the New York State Department of Transportation dated January 2nd, 1973."

BY MR. FLORENCE:

Q. Now, when you refer to the inspection of maximum amount of moisture or minimum amount of moisture at 95 percent, you mean, if I understand your standards correctly, not more than 5 percent moisture?



A. No, I don't mean that.

Q. What do you mean by -- if I can ask it in more direct language --

A. If I'm permitted some levity, if you want to sign up for the seminar I'll give you the course on it.

But there are a series of curves that are run on soils and laboratory densities are performed on it. You arrive at what you call maximum optimum dry density. You perform that in the field, you take field tests, bring them into the laboratory, plot them against your curves and determine what the actual density is going to be.

Q. Essentially density is a critical factor of the construction of the dam as well as moisture is, is that true?

A. Definitely.

Q. And now, is there any consideration taken for the placement in the dam itself of any of the utilities which may or may not be upon the premises?

A. Is there any consideration?

Q. Yeah, is there anything in this -- in any of these plans that has taken that into account, for example, the placement of power lines, either in or along --

I understand these power lines are going to be buried, are they not, according to the requirements of the DRD?

A. I don't know if the power lines come up that side right now or across at that particular point. Probably the sewer line.

Q. Sewer line?

A. Probably.

Q. Possibly telephone lines?

A. Maybe. I don't know because --

Q. What about drainage -- excuse me.

A. I really couldn't tell you what the -- as far as power and the telephone are. There are lines available.

Q. What about your storm drainage lines?

A. I wouldn't carry storm drainage into a dam.

Q. Now, with a dam of a base thickness of 170 feet, certainly there will be connections to the pipes that are taken through that dam at the base of it or wherever you have your outflow, is that correct? You have a pipe or piping going through that dam any place?

A. I have the main box covered, yes, sir.

Q. And is there any provision to insure against any



leakage?

A. Along the --

Q. On or along the lines where the pipes might be connected to or connected to the culvert or to each other?

A. As shown on this plan, no, there's no provision at that time.

Q. Would it be fair for me to make this summary statement, that frost or freezing in A-1 or A-2 plastic earth will have an effect on that earth?

A. No.

Q. That's an inaccurate statement?

A. M-m h-m-m.

Q. All right. Are you familiar with Seelye's Handbook on Civil Engineering?

A. Yes, I am, the recommendation is for A-1 or A-2 plastic soils.

Q. Yes, and are you familiar with the table in it or any of the tables relating to the class -- the A-1 or A-2 plastic soils?

A. I can't -- I can't recall them off memory.

Q. And if I show you nine --

A. Let me explain the reason why and you wouldn't--

Q. No, I just asked you if that would refresh your

recollection, as it relates to A-1 and A-2 soils and the effect of frost upon it.

A. "Stability: High when dry; base, fair; sub-base, good; fills, under 50 feet, excellent; fills over 50 feet, good; frost action, subject to."

Q. In other words, it is subject to -- that A-1 and A-2 plastic are subject to frost, therefore affected by it?

A. That's a relative thing. It's an extremely relative thing. If it's near, at or near a water table and subject to the elements under water, yes, there can be frost action. If it's sitting up in the air and it's kept fairly compacted and dry, very little. Again, the dam is 246 times safe strictly by sheer weight and you can lose a foot off of the top of that thing all around and it wouldn't make a dent in it.

Q. In relation to the outflow from the sewage plant to the structure that's the outflow structure, and we'll -- want me to go back over that one, back over that? Is the outflow structure directly connected to the sewer plant itself, physically connected to the building that is called the sewer plant?

A. You talking about --



MR. BLASI: If this relates to the sewer, I'm going to object. I mean to the sewerage plant.

MR. FLORENCE: I think we're having a hearing about the outflow structure. I'm trying to put it in its location.

MR. DICKERSON: If the question --

MR. FLORENCE: I want to know where the outflow structure begins.

MR. DICKERSON: Why don't you summarize it that way.

Q. Where does the outflow structure begin in the area closest -- in its closest proximity to the sewer plant?

A. Begins at the plant.

Q. At the plant itself?

A. There's a pipe leading out of the plant.

Q. It leads --

A. It leads to an aeration chamber and thence it runs.

Q. How far is the aeration chamber from the plant itself?

MR. BLASI: Now, I'm going to object. He's getting into the details of the sewage plant. That was all covered by Mr. McPhee.

MR. FLORENCE: I'm getting to the outflow.

MR. DICKERSON: Pick it up from the aeration chamber downstream if you will.

Q. Is the aeration chamber part of the outflow structure?

A. I wouldn't think so.

Q. Are you designing it?

A. No.

Q. That will take care of that answer. Where are you picking up the outflow structure? Where does your responsibility begin?

A. My responsibility on this is to relocate the stream--

MR. DICKERSON: Here, that's covered in this pack of papers (indicating). I think you'll find it in this one. You want to look at this exhibit?

THE WITNESS: Well, this is the one that we prepared and then, of course, showed this line on the blow-up (indicating).

MR. DICKERSON: All right, let's go off the record for a minute until we just sort out which one you want.

(Discussion off the record.)

MR. DICKERSON: Let's go back on the



record. Out of the file we have plucked Exhibit No. 26.

MR. FLORENCE: I don't even remember what the question was.

(The pending question was read by the reporter.)

MR. FLORENCE: O.K. I'll restate the question.

Q. Where does your responsibility begin with respect to the outflow structure as far as you're concerned in this project?

A. My responsibility begins with the stream relocation.

Q. I'm referring -- direct your answer if you would please to the outflow structure.

A. I am. I'm getting to that. The question of the outflow structure that passes underneath this stream and the box culvert here at the outflow.

Q. Are you designing the outflow structure itself and its location?

A. No, the outflow structure, the entire sewage treatment plant --

Q. Is that part of the plant?

A. Excuse me.

Q. I didn't mean to interrupt you, but I was curious, is it your statement that the outflow structure is part of the sewage plant?

MR. DICKERSON: I think we'll have to distinguish a couple points here for clarity. I'm going to mark Exhibit 26, a box that is designated "Aeration chamber," I'm going to encircle it in green with the green marker pen. From that point, I'm going to ask Mr. Bibbo to mark as best he can the areas of his concern with this application.

THE WITNESS: Again the basic relocation of that stream.

MR. DICKERSON: Mr. Bibbo has lightly marked with a green marker pen using diagonal slashes the depiction on Exhibit 26 of the relocated stream channel, the details of which are shown more fully on Exhibit 35 and its predecessor.

MR. FLORENCE: That really wasn't my question.

MR. DICKERSON: O.K. I want to get -- you see what we're getting at?

MR. FLORENCE: O.K. All right.

MR. DICKERSON: Because you're tying in



an effluent structure, a pipe and a sewage treatment plant and they're three different things.

MR. FLORENCE: Well, I'd be glad to learn that.

MR. DICKERSON: That's what I'm trying to clean up and then we can go.

MR. FLORENCE: That's a funny word.

THE WITNESS: The relocation of that stream and then jumping right down to the outflow structure.

MR. DICKERSON: Would you --

THE WITNESS: I did not design this line that was requested.

BY MR. FLORENCE:

Q. Yes, that was my question.

A. I did not design that line.

Q. Yes. Do you know what it is?

A. It's a sewer line.

Q. Would you by chance know how it's connected between the treatment plant and this aeration chamber?

There doesn't seem to be any connection and I'm at a loss to understand how it -- the sewage would go from one place to the other.

A. No, you would have to -- you would have to examine the sewage treatment plant. There is a definite connection between the two. I can state we were making something schematic here and this --

Q. You mean a confining structure of some sort, a pipe?

A. Definitely, would have to be. Now, I marked also with a green circle the portion -- the other portion of this plan that we're concerned with.

MR. DICKERSON: And let's put the second green circle on Exhibit 26 with the letters "ES" also in green and these depictions on the right portion of Exhibit 26 are the details of that structure, is that correct?

THE WITNESS: That's correct.

MR. DICKERSON: O.K. Mr. Florence?  
To refine our -- he's encircled the plan view and checked with green the detailed structures, the details of the effluent --

MR. FLORENCE: What do the letters "ES" stand for?

MR. DICKERSON: I asked him to use the letters "ES" to indicate the general location of the effluent structure or whatever else we're going to



call it. "ES", I think was referred to in the notice as the sewage effluent discharge structure.

MR. FLORENCE: O.K.

Q. In relation to the outflow structure that is located on Exhibit 26 on property owned by the applicant or property of another that you know of?

A. To the best of my knowledge, the State of New York.

Q. Do you have a writing or any -- in your possession, any present permission to actually construct on the State of New York property the plan as it's laid out in Exhibit 26?

A. No, I did not.

Q. Is this outflow structure going to include the water which is discharged from the Port-Saia pond as well as the treated sewage?

A. I'm sorry, could you ask that again?

Q. Yes. Does this outflow structure carry with it in addition to the sewage water, the water that would be discharged from, say, the Port-Saia Pond?

A. It's an extension of the existing box culvert so, therefore, it would, yes, sir.

(Continued on page 917)

Q. So there would be -- whatever else, there would be a mixing here of water from the stream together with the sewage effluent?

A. I would say so.

Q. Now, in addition -- would it be possible, probable or even likely that there would be times that the sole discharge on the south side of this outflow structure would be solely the treated sewage but not any of the water from the Port-Saia pond given proper climatic conditions?

A. It is possible?

Q. Yes.

A. I suppose it's possible.

Q. All right.

A. If the entire drainage basin dries up bone tight.

Q. Have you made observations as to the drying up of the Brown Brook during the time that you've been active in -- in your area of expertise in this area? I mean, in this geographical area?

A. Since I've been connected with this project?

Q. Yes, and, well, not only the project but even before that.

A. I have observed it this summer and I observed it last



summer, yes.

Q. Now, is it possible that the dam --

A. I'm sorry, did you ask me did I observe?

Q. Yes.

A. Did you ask me anything else?

Q. Did you observe the drying up, is what I'm concerned with.

A. No, I didn't observe the drying up, not at all.

Q. Did you observe that it did not dry up?

A. I observed that it did not dry up, yes.

Q. There are -- there is no question that there are fluctuating streams though from the flows from the natural drainage basin, is that correct?

MR. BLASI: I didn't hear the question;

I'm sorry.

BY MR. FLORENCE:

Q. There's no question that there are varying flows from the natural drainage basin of the Brown Brook?

A. Every stream varies in flow, yes, sir.

Q. That's also true of this stream, is that correct?

A. Very definitely, m-m h -m-m.

Q. Now, is there any possibility that the A-1 and A-2 plastic materials will in any way absorb or have

moisture going from the water or the pond side of the dam seeping into it?

A. To some extent, I suppose it would be, yes, at a certain level.

Q. M-m h-m-m. Are there certain conditions which could exist in periods of low flow of the Brown Brook where it is entirely possible that there would be an input on your -- on the northern side of your pond where your dam is located and no output?

A. I don't see how that could happen. I don't see how you could put something in without its coming out.

Q. Well, there's such things as adsorption or evaporation or any other factors?

A. No, not in a pond that size, no.

Q. How many acres is this pond?

A. Surface area, under or at flood -- under flood condition, no; actually the pond itself is about one and a half acres.

Q. About 60,000 square feet?

A. Something like that.

Q. Or better, give or take?

A. 1.6 acres, I believe, is what was --

Q. The question comes down to this really, I think:



Is the presence of the dam in periods of low flow going to further restrict the flow of the Brown Brook than it -- than without the presence of the dam?

A. No, I wouldn't think so. I wouldn't think so at all, and I can explain it. I think I can explain it on several -- offer several bases for it. In order for that pond level to drop, water would have to stop flowing into it.

Q. Well, if we take a --

A. And in order to -- just like that --

Q. Yes.

A. Wait a minute, let me finish.

MR. BLASI: Let him finish.

THE WITNESS: In order for water to stop flowing into that dam, water would have to stop flowing into it. I don't think the area is large enough -- in fact, I know it's not large enough for evaporation purposes. The soil in the area is not gravel soil so that we could expect seepage through the side walls of the embankment. If water did stop flowing into it, the gate down at the bottom of our dam could be cracked and some

water released.

Q. That would be a malfunction of the dam itself?

A. No, no, no, not at all. Has nothing to do with that. Let's assume, or I say I'm assuming right now that the water stopped going into Brown Brook, bone dry condition. We have water in that pond. We have, in addition to the structure, we have at the bottom of that structure, we have provided a gate. We could crack that gate and allow water to come down Brown Brook.

Q. That would require judgment or somebody to say to the management or whoever was responsible for the control of that, that they would then decide on the cracking of the valve to permit flow; is that a way to put it?

A. I guess there would. If there's no water coming in and judgment would say do we want to, we don't have to, or we can.

Q. All right. Now, is it possible that that water could be used for -- in usage within the designed residential development?

MR. BLASI: What water are we talking about?

MR. FLORENCE: Interior purposes, I'm



talking about.

MR. DICKERSON: You're referring to --

MR. FLORENCE: To the pond.

MR. DICKERSON: To the pond.

BY MR. FLORENCE:

Q. The interior surfaces of the pond.

A. You mean for drinking?

Q. No, for purposes other than drinking, for watering the golf course, for care of lawns, for emergency fire purposes, for matters other than drinking.

A. No, I would think it's too small.

Q. This would have a depth of 8 feet?

A. At the deepest end; approximately 4 feet at the shallowest end. It's sufficient enough to keep a depth of water in it, that's all.

Q. In fact, wouldn't the presence of the dam magnify the -- in the summertime, the low flow? It would exacerbate the reduced flow by its very presence within the natural flow basin of the Brown Brook?

A. The dam would magnify it?

Q. Yes, it would exaggerate the lack of flow in times of drought?

A. How would it do that? If it stored water --

MR. BLASI: He just testified -- I have to object to this question. He just testified that in low periods the gate could be cracked and water could come down.

7/5/1

MR. FLORENCE: Could be a little different than the question.

MR. BLASI: And he's just going right back over the same question, what happens --

MR. FLORENCE: Could be, you know, I could walk on water.

MR. BLASI: Just repetition, repetition.

MR. DICKERSON: A question I was going to ask and I won't. I'm going to sustain the objection. You've already covered that. If you realize you covered it, all right. If you don't, I'm sorry.

MR. FLORENCE: O.K.

Q. In relation to the change of the stream bed, as I understand the -- the height, the stream characteristics, O.K.? So there won't be confusion, the characteristics of the stream as they approach the area which is sought to be altered, would you say the stream is straight; would you say that there's a meandering factor of any consequence at all?



A. Prior to reaching there?

Q. Yes.

A. Well --

MR. BLASI: May we have the area fastened down? I mean we're talking about the whole length of the stream. We could be here all afternoon.

MR. FLORENCE: It is fastened down. It's the area just prior to where the reconstruction is.

MR. BLASI: You have an exhibit there. Why don't you refer to the exhibit? It's on one of the exhibits.

MR. DICKERSON: We'll have to go back, I believe, to Exhibit 4 for the best depiction.

MR. FLORENCE: This just shows the area proper of the relocation.

MR. BLASI: Look at that one, Leonard. Look at the exhibit.

THE WITNESS: It doesn't really show the stream.

MR. FLORENCE: It doesn't show the stream too much.

THE WITNESS: I can't -- all right, let

me -- I can't classify this as a meandering stream if that's what you're getting at, and by "meandering stream" I would say -- by a meandering stream, I say that in which a stream throughout its entire length runs back and forth, traverses sideways going down. It has two or three hundred feet of straight run. There might be a small bend in it, a widening of the stream back into another area. I can't classify it as a meandering stream.

- Q. When a stream does have bends in it, it tends to slow the flow of the water in the stream down, does it not?
- A. During normal flows, yes.
- Q. In fact, what happened is that the bend causes the water to turn in direction?
- A. M-m h-m-m.
- Q. And if there's a bend then, would it also be true that the bend tends to get greater because the water doesn't have a natural tendency to change its own direction but to go straight?
- A. There would tend to be scour along the bank.
- Q. And by this turning and forcing of its turning, it would have a net effect that the feet per second of water flowing past a particular point would be reduced



in some manner, to some degree, depending on how meandering the stream was?

A. It just depends on how meandering the stream is, what the cross-section of the channel is.

Q. Also maybe the --

A. What the width of the stream is, the whole thing.

Q. All right. But given two potentials, same elevation, one stream which meanders and one which goes straight, the one which goes straight achieves the highest velocity, all other things being considered equal, correct?

A. Yes.

(Continued on page 927)

Q. In the relocation of the stream as it's proposed in this application, the velocity of the proposed -- of the water in the proposed stream given identical situations with the original stream would be greater as it would exit from the applicant's property all other things being considered equal, is that correct?

A. I really can't state that as a matter of fact. You know, when I say the velocity would be greater we would be talking about a very thin section where it may be fast, deep sections where it may be a little bit slower. If you are talking about a foot per second or two feet per second and you cover a hundred feet, 200 feet, 600 feet, two feet per second, maybe a minute, two-minute time, there are so many circumstances, extenuating circumstances to this, I can't make a blanket statement.

Q. With respect to the proposed bed of the stream where you propose to locate it, how are you going to plant or what are you going to use to plant along the sides?

A. We're going to seed it with grass.

Q. What kind?

MR. BLASI: That was testified to this morning.



MR. DICKERSON: I'll permit that second question, sir.

MR. BLASI: All right, go ahead.

A. I haven't written the grass specification yet, but it will contain fescues, some rye grass.

Q. Is it true that depending upon what grass you use, certain grasses can support a greater load than others, that is, will not break down under certain conditions, whereas others will?

A. You are asking me the grass stay in that stream?

Q. No, we're kind of asking it my way. I'll try it again.

A. I think in that particular case I'd have to consult with somebody in landscaping. I'm not a grass specialist.

MR. DICKERSON: Why don't we take a two- to three-minute break.

(Short recess.)

Q. Mr. Bibbo, are you familiar with any publications dealing with the maximum permissible velocities of channels lined with uniform stands of various grass covers?

A. No.

Q. Any publication?

A. No.

Q. Did you consult any publications or any tables in relation to charting or plotting either the maximum feet per second of the proposed channel, the water of the proposed channel or the configuration of it?

A. I consulted with the Soil Conservation Service as far as velocities go. I consulted with DEC as far as what the velocities they suggested that we should provide for.

Q. In other words, when you say DEC, you mean the New York State Department of Environmental Conservation?

A. Yes, sir.

Q. They gave you a figure to work for?

A. They talked about eight feet per second was a desirable run.

Q. Did they say that was a desirable run or the maximum permissible rate?

A. They didn't say it was a maximum permissible rate. I know I've read more than that in the stream channels right now.

Q. Is it your understanding that eight feet per second-- more than eight feet per second would be a permitted although not desired speed for water in the proposed



channel?

A. The eight feet per second is for grass surfaces to prevent the erosion. The stream channel can carry more than that.

Q. Have you got soil tests to determine what the base of this stream will be where it's proposed to be laid out?

A. In a specific area, no. Adjacent to it I have observed soil, yes.

Q. But you haven't taken, say for example, test borings where you are going to relocate this new streambed or where the proposed streambed would be?

A. No, I know the soil in the general area and, therefore, I did not take them directly into the stream.

Q. How deep are you going to dig this proposed channel as an average or a mean depth up to the plug, from the plug down to where -- well, let me rephrase the question to make it more understandable.

What is the mean depth to which you intend to dig this proposed channel of 650 feet?

MR. BLASI: Show him that exhibit.

Why don't we go to the exhibits.

MR. DICKERSON: Exhibit 35 I think is the best one.

MR. FLORENCE: Here's 34. Here's 35. I can't read it.

A. In the area of the existing ground the northerly end of the channel is proposed and an elevation depth of channel elevation, 356, existing ground varies approximately at 360 from 16.5.

Q. What does that mean?

A. That there will be approximately four foot depth of cut.

Q. Do you have the present charting of the depth of the stream as it presently exists on there?

A. Invert elevation?

Q. Well, the depth of the existing stream as compared with the figures you have for your proposed stream?

A. The depth, width and length of the existing channel varies. I have a spot elevation at the front part of it and a spot elevation at the back part of it.

Q. But no measurements in between on the 650-foot approximate length that you are going to relocate, is that true?

A. I have some cross-sections in my office where we



took cross-sections across the portion of the stream.

Q. Would it be fair to say that they are not part of this particular application, anywhere in any of the papers you have submitted to this application?

MR. BLASI: I object. The application speaks for itself and the exhibits speak for themselves.

MR. DICKERSON: Sustained.

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Q. Could you point out for my edification the profile of the existing stream in any exhibit?

A. From start to finish, yes.

Q. Would you indicate to me what exhibit that is?

A. Exhibit No. 35.

Q. What depth is the stream as it goes along?

A. You said the profile.

Q. Do you have any depth measurements?

A. I have an elevation of the invert at start. I have an existing general invert at the connection.

Q. Now, as I read your testimony of the drainage basin of the Brown Brook above the dam you had a certain type of estimate?

A. Yes.

Q. Would you estimate for me how much additional area

drains into the Brown Brook where the Brown Brook would traverse the tip of the Sun property?

A. Would I estimate it for you?

MR. BLASI: Once again I object to the question. It's rather vague. I don't understand it.

MR. FLORENCE: I submit you are not testifying.

MR. BLASI: I have a right to understand the question and I have a right to make an objection as to its vagueness. We have a lot of exhibits here. If you will point to the area that you are talking about instead of these nebulous descriptions of areas which are floating around, then I think I would withdraw my objection.

Q. In relation to Exhibit No. 23, would you give us the total drainage basin of the Brown Brook below the dam? I see that it's already been outlined above where the proposed dam is to be placed, but what additional areas are drained by the Brown Brook?

MR. DICKERSON: Exhibit 23 is marked with a green marker. Exhibit 23 has been outlined with a green marker pen and cross-hatched with a green marker pen to indicate the additional drainage area,



the approximate additional drainage area.

Q. Do you have an estimate, your best estimate, of the additional area that would be included by that?

A. I've got a drainage computation somewhere that includes -- I'll find it -- the major portion.

O.K. I know it's approximately about 80 acres, I guess, 75-80 acres, somewhere in that vicinity.

Q. Now, you personally resided in this town a number of years, is that true?

A. Yes, sir.

Q. Would you have an estimate of the number of households which are presently in the town, in this town?

A. Today?

MR. BLASI: I object to that question. What is the relevancy of the total number of households?

MR. FLORENCE: It will be connected.

Q. In relation to the number of households proposed to be developed by this application.

A. No, I don't have any estimate.

Q. Have you taken purity tests of the stream to the south of the present application and to the reservoir on the

Sun property?

A. I did not. My associate did at one time, took tests in the pond area.

Q. I'll show you this. I'll mark it for identification for you in a moment. We can deem that marked for identification. Are those the tests?

A. Yes, sir.

MR. FLORENCE: Would you mark them for identification?

MR. DICKERSON: I will.

MR. FLORENCE: I'm sorry.

MR. DICKERSON: I'm going to use the same number for both of these.

Exhibit No. 38-A is a water analysis entitled "Results of Examination of Water and Waste Water." The sampling point is the stream north end near 202, Sun Enterprises, Ltd., and Exhibit 38-B is for water analysis entitled "Results of Examination of Water and Waste Water," sampling point is shown to be Reservoir No. 2, south end, Sun Enterprises, Ltd.

(Exhibit No. 38-A and 38-B described above, were marked for identification, this date.)

MR. BLASI: May I see those, please?



MR. FLORENCE: I offer them in evidence.

MR. BLASI: I object at this time because Mr. Bibbo did not do these tests. He said he didn't do them. We don't have the person who did do them here. I don't know what value they are until I can get a chance to know what the significance or relevancy is, until I get a chance to review them.

MR. DICKERSON: Do you want to lay a groundwork for them? I will sustain your objection and comment that it appears to have been performed by the Health Department or County Laboratory as far as the analysis portion of it, and I'll ask you to lay a groundwork for your submission.

Q. Mr. Bibbo, were you asked to make certain water purity tests or take water samples for the purpose of examination on or about August 7th, 1972 or before that?

A. My associate took those tests.

Q. Was your firm, Mr. McNamara is the person who actually took them, is that correct?

A. I don't know who did the bottling of the water, if that's what you mean. I know that Mr. McNamara was there and present when these tests were taken.

Q. Was your firm retained to do that and Mr. McNamara

from your firm did it?

A. Yes.

Q. That was August 7th of 1972?

A. Last year, yes.

Q. And what is the normal procedure once those samples are gathered, if you can determine from the papers that I've handed to you.

A. They are brought into a laboratory for examination.

Q. What laboratory were these tests made at?

A. County of Westchester, Department of Laboratories and Research, Valhalla.

Q. Is that a report given in the regular course of their business which you in turn turned over to the person requesting these tests, to your knowledge?

A. These are copies. I don't know who got the originals, but we got copies of them. The originals were sent directly to Sun Enterprises.

Q. Those are tests which were made in the regular course of business of the County Laboratory at Grasslands?

A. Yes.

Q. And the report is duly noted on those forms in the regular course of their business?



A. These are copies of the report that we got back.

Q. That's the normal kind of report that they make for the purity of water, is that true?

A. I've got to step out of that for the simple reason -- I've got to refrain from answering that one for the simple reason that I am a novice in the field of sewage and water supply and this is one of the reasons why Mr. McNamara took this. All right? My expertise does not extend to qualities of water.

Q. In relation just to the taking of the test itself, I won't ask you to comment to the purity of it, is it your experience that this is how you get a report and that this is a report made in the regular course at your request by the county?

A. I would have to say that that's a report sent by the county, yes.

MR. FLORENCE: I offer it.

MR. BLASI: I may withdraw my objection to this but at this point I still make the same objection, and I would like to have copies of these and I would like to have an opportunity to verify them as the tests made as Mr. Florence says they have been. These apparently are copies. They are not signed by

anybody and with due respect to Mr. McNamara, I think any further -- we will be here tomorrow --

MR. DICKERSON: Do you want the verification on the record or for your own personal knowledge of the accuracy of these reports? The reason I ask that, there are laboratory numbers on these that you can have checked out if you want.

MR. BLASI: I would like an opportunity to check them and verify them before you admit them into evidence.

MR. DICKERSON: That's what I just want to clarify. There are two way of verifying this.

MR. BLASI: Right.

MR. DICKERSON: Secondly, Mr. Florence, Mr. Blasi has asked for copies of these.

MR. FLORENCE: I can have photostats made right out here if they will do it. There is no secret to them.

MR. DICKERSON: I'm going to withhold receiving them into evidence at this time and I'm going to ask that before you re-present them we will give Mr. Blasi an opportunity to do what he will with them, that the sampling points will be keyed into any



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(Leonard Bibbo)

939A

one of the exhibits that we have already got.

MR. FLORENCE: Mr. McNamara will be  
here tomorrow?

MR. BLASI: I don't know.

MR. DICKERSON: Mr. Florence, could you make a copy of these for Mr. Blasi?

MR. BLASI: Right.

MR. DICKERSON: Mr. Blasi can verify to his satisfaction the results of this analysis.

MR. BLASI: It may not be --

MR. DICKERSON: And any -- he can make the motion at that time. I'm just going to reserve on receiving these two exhibits but before they are received, I am saying I will want the sampling points located as best possible on one of the exhibits. With that understanding, I'm going to give them back to you unless it's essential to your case at this point in time and ask you to hold them for now.

MR. FLORENCE: Just as long as we have essentially a witness here who has done the work, whose firm did the work, just with the understanding that somebody from his firm or somebody else will be able to verify them.

MR. DICKERSON: Well, Mr. Blasi can substantiate the content of these reports by using these lab numbers and referring to the Department for their records and that may satisfy and it may not.



If it will, this will alleviate one problem.

MR. BLASI: Right.

MR. FLORENCE: Can I have these photostated?

MR. DICKERSON: Off the record.

(Discussion off the record.)

MR. DICKERSON: O.K. Let's go back on the record.

BY MR. FLORENCE:

Q. Mr. Bibbo, in relation to the -- any of these parcels of -- excuse me, any of these exhibits showing the Sun parcel, could you -- are you personally aware of any wells being used on those parcels to draw water for potable purposes?

MR. BLASI: Once again we're getting vague, Mr. Florence, and I must object to the question.

MR. FLORENCE: I'll lead him. I'm permitted on cross.

Q. Are you familiar with the New York State Police wells used for drawing water for their State Police facility near Peekskill?

A. I know where the well is.

Q. Could you locate that, please, on one of these exhibits?

MR. BLASI: Put it over there,  
put it on the geodetic, will you?

MR. DICKERSON: I hate to mess up  
Exhibit 23 any further --

MR. FLORENCE: Could we --

MR. DICKERSON: -- but let me try and  
find a new color. 23 is in evidence?

MR. BLASI: That's right.

MR. DICKERSON: Off the record.

(Discussion off the record.)

MR. DICKERSON: We'll go back on the  
record.

Mr. Bibbo, will you indicate on  
Exhibit 23 with a black marker pen the approximate  
location of the well that's just been referred to?  
Indicate it with a black circle and the letters  
"SPW".

THE WITNESS: I know the general  
location.

MR. DICKERSON: The approximate  
location will be sufficient at this time.

MR. BLASI: Here is the Baptist Home  
right here (indicating).









THE WITNESS: I would assume it's in this area here somewhere(indicating).

MR. DICKERSON: Mr. Bibbo has indicated the approximate location of the well with a black marker pen showing an "X" with a circle around it and the letters "SPW".

MR. FLORENCE: Have you conducted --

MR. DICKERSON: Mr. Florence.

BY MR. FLORENCE:

Q. Have you conducted any tests on the New York State Police well for purity or any other reason, the water itself?

A. I did the sewerage for the State well, the State Police, and the well was in existence at that time. I don't recall whether we took a bacterial analysis of it at that time or not.

Q. Are there any other wells, to your knowledge, in the area of where the Brown Brook traverses the Sun property?

A. The only well that I'm familiar with at that particular point is that well because it apparently served three units.

Q. Do you know anything about the flow?

A. The reported flow, I've never tested it.

Q. No? What is its distance, if you recall, from the present nearest distance to the Brown Brook?

A. I couldn't give you that.

Q. Do you know the source of the water, that is, the depth of the well?

A. No, no idea whatsoever.

Q. Is it grossly the same elevation as the stream is in and about that area?

MR. BLASI: What area?

MR. FLORENCE: The area where the well is.

MR. DICKERSON: Let's take about a one-minute break.

(Discussion off the record.)

MR. DICKERSON: O.K., ladies and gentlemen. Why don't you just rephrase the question?

MR. FLORENCE: O.K.

Q. Is the well at the same elevation as the stream?

A. The top of the well or the bottom of the well?

Q. Top.

A. I've been on the top. It's on a high point. It's been well over a year since I've been on it and I



know it's on a high point and in the general area I've pointed out it's higher than the stream. I don't know how much higher than the stream.

Q. Could you characterize the soil's percability between the well and the stream or do you have any information about that?

MR. BLASI: Percability?

MR. FLORENCE: I made up a word.

MR. BLASI: I was just --

MR. DICKERSON: It's engineering slang although Counsellor may not have been aware of it, referring to the percolation capacity of the soil.

A. The only soil I have particular knowledge within that area is the soil I saw excavated in that area and that was sand and gravel, came out --

Q. Well, would that indicate to you a high degree of percolation between the stream and the well?

A. Not necessarily.

(Continued on page 946)

Q. That is not percolation but the -- but a soil which would percolate given proper conditions?

A. I don't know. We've got quite an overburden in that area of organic silt and covers a good portion of that. I don't know just what the capabilities of transmission would be.

Q. All right. Are you familiar with the area which is on this exhibit --

MR. DICKERSON: 22.

Q. (Cont'g.) -- No. 22, which has been as of this date disturbed by improvements so far?

MR. BLASI: Is that improvements in quotes?

MR. FLORENCE: Yes, that's that (gesturing) change but not necessarily progress. Surface areas that have been disturbed, in other words.

MR. BLASI: Are you talking about your property or our property?

MR. FLORENCE: What are you an owner of?

MR. BLASI: No, I mean you haven't identified the property.

MR. FLORENCE: The property --

MR. BLASI: If you'd refer to the



exhibits we'd know what you're talking about.

MR. FLORENCE: The property shown on Exhibit No. 22.

Q. Well, instead of using that thing, of the whole project which is the subject of this application, are you familiar with the areas which have been disturbed as of this date?

A. I'm familiar with certain of those areas, yes.

Q. Could you give me an estimate of the acreage involved in the --

A. No.

Q. Could you give me a rough estimate?

A. Here we go again. Do you want me to take out a map and measure it for you.

Q. Can you give us some idea of the total amount that's been disturbed?

A. I tell you what, there's been a model area with buildings on it. There is material being taken in the area of the proposed pond at the sales and administration building. There have been some roads cut so we can get some equipment back in. The golf course is going on.

Q. Would you say there's more than a hundred acres

involved in excavation that has -- in which --

A. I wouldn't say.

Q. Would you say it's less than that?

A. I wouldn't say.

Q. Wouldn't say one way or the other?

A. No.

Q. Have you been physically up to the golf course?

A. I've been over it, yes, sir.

Q. And you don't have any opinion as to the amount, the total amount of the golf course area that has been disturbed?

A. No.

Q. Do you have any --

A. The last time I was there was over a month ago.

Q. And at that time how much had been disturbed?

A. I only saw a certain portion of it. I couldn't tell you.

Q. Half of the golf course, half of it, more than half?

A. Your guess is as good as mine.

Q. All right.

A. In fact --

Q. Given the --

A. -- let me be more specific. The last time I was



over there was through that entire area at a time I was there with Robert Jonas, O.K.?

Q. Given the hypothetical of an acre of disturbed area in a particular drainage basin, let's hypothesize the Brown Brook drainage area, is it your experience that there is a siltation process that occurs when the surface soil is disturbed by excavation?

A. By simply a process?

Q. By rainfall which follows, hypothetically, rainfall following an excavation of an area or an acre of land?

A. Can it carry silt with it?

Q. Yes.

A. Yes, it can.

Q. In fact, does that alter, in your judgment, in your experience, the ability of the soil to absorb rainfall?

A. It depends.

Q. Does the excavation of any hypothetical acre reduce its ability to absorb moisture?

MR. BLASI: Is this a hypothetical question? I don't understand that. Are you testing him on his ability? Are you referring to something specific or what?

MR. FLORENCE: I'm just asking a simple

question.

MR. BLASI: Because he testified this morning as to everything that was done and the measures that were taken.

MR. FLORENCE: Nobody is -- nobody has talked about the actual results and I'm about to get to the actual results.

THE WITNESS: You asked me a hypothetical. Ask me a specific question and I'll give you a specific answer. Ask me a hypothetical question and you'll get a hypothetical answer.

MR. FLORENCE: I'm looking for a hypothetical answer so far.

THE WITNESS: O.K.

MR. FLORENCE: Would you like to take the oath and then maybe you can answer?

MR. BLASI: Sure, I'll take an oath anytime. I always tell the truth.

MR. DICKERSON: Gentlemen, gentlemen.

MR. FLORENCE: Could we get the witness' answers?

MR. DICKERSON: Can we get the question read back and we'll press on, please, Pauline?



(The pending question was read by the reporter.)

THE WITNESS: Again, I'd have to say that in my judgment it depends on what the undersoil is.

BY MR. FLORENCE:

Q. Has the excavation on the applicant's parcel of land, the excavation which has occurred to date increased the siltation in the Brown Brook?

A. I had found no evidence of siltation in the Brown Brook. I found evidence of colloidal suspension.

Q. In other words, you got muddy water?

A. In other words, we have a dark colored water. It's not a muddy water.

Q. Did you observe the water before the excavation or any -- any excavation on the property?

A. Yes, yes.

Q. Was it clear at that time?

A. Not always. I have observed the --

Q. Was it clear except for periods after, say, a remarkable storm?

A. Not necessarily. If I observed that particular stream, I've observed -- I've observed the so-called Port-Saia pond prior to their homes being built on it and during the conception of their homes on it and I've seen it when it had, what do you call, the brown or clay particles suspended in it.

Q. Were those periods of times of observation the majority of the time muddy water, or was it basically a clear water with muddy periods because of storm or other upset?

A. I could never see down to the bottom of the pond. I could see along the edges of it.

Q. I'm referring to --

A. I could see along the front.

Q. Let me finish.

A. I could see along the front and along the back of it. At times there were cloudiness and at times I've seen what we call the brown water in it. I've seen it clear up and I've seen it become brown again.



Q. I've asked and could you answer the question the way I asked it: That is, was there more -- was there a greater period of time when you observed it to be muddy or was there a greater period of time when it was clear with the exceptions of muddiness?

A. I couldn't --

MR. BLASI: He didn't use the word "muddy." I object to the form of the question.

Q. Clear and unclear, how about that? I'll withdraw my question.

A. I couldn't give you the number of times because they were casual observations.

Q. How about --

A. I happened to be there --

Q. How about --

A. I happened to be there when the sewage was under construction. The homes were going up.

Q. And how about --

A. I saw the pond.

Q. How about down below on the Kipp property or the Sun property, did you make observations as to how clear that water was prior to any development of this parcel?

A. Deep greenish hue at times. Other than that, I took no specific notice of it.

Q. Was it generally clear water?

A. I would think in the times that I've been there, it was generally clear, yes, sir.

MR. FLORENCE: With the exception, which I would reserve my rights and my tender of evidence of Exhibit 38-A and B, I would rest in my cross-examination of Mr. Bibbo.

MR. DICKERSON: Thank you.

Mrs. Port, do you have any questions or your husband have any questions?

MRS. PORT: Not at this time.

MR. DICKERSON: Mr. Blasi, at this point, it would be appropriate for redirect. You indicated that you would prefer to go over the minutes and conduct your redirect in the morning, is that correct?

MR. BLASI: Yes, I would because I don't have anybody taking them for me as a rule.

MR. DICKERSON: Do you have any other witnesses or anything that you would --

MR. BLASI: There may be a few details



after conferring with my client that I may wish to present.

MR. DICKERSON: But nothing at this moment?

MR. BLASI: Nothing at this moment. I was respectfully suggesting that if some of these other gentlemen are here who may wish to make statements, it's only a respectful suggestion. You're running this hearing, not me.

MR. DICKERSON: O.K. Does anybody volunteer?

Let's take about a two-minute break and I mean a two-minute break, and see if we can make some use of the rest of the afternoon.

THE WITNESS: Am I off the hot seat for a while?

MR. DICKERSON: Very briefly. Mr. Blasi may want to fill in some holes and take you over the coals.

(Whereupon a short recess was taken.)

MR. DICKERSON: Mr. Blasi, do you have any objections if I reserve all of my questions to the end for Mr. Bibbo?

MR. BLASI: What was that?

MR. DICKERSON: I have a few minor points. I'll save them.

MR. BLASI: Oh, no, I never question that.

MR. DICKERSON: O.K., ladies and gentlemen. Mr. Blasi wishes to examine the minutes before his redirect examination of Mr. Bibbo. We've got a good hour left to us today. Mr. Weber has a statement to make. If there are questions on Mr. Weber's statement, that will extend past the hour, we will resume with Mr. Bibbo in the morning and then pick up, if you'll excuse the expression, with what's left of Mr. Weber. That way we can make the best use of our time, I think, for this afternoon.

Are there any objections to that procedure for now?

MR. BLASI: No objection on behalf of the applicant.

MR. DICKERSON: I think we can get a good hour in then.



CALVIN E. WEBER,

having been first duly sworn, was examined  
and testified as follows:

MR. DICKERSON: Mr. Weber, will you  
give us your full name and address as well as your  
title?

THE WITNESS: Calvin E. Weber. I live  
at Spruce Street, 3418 Spruce Street, Shrub Oak, New  
York. I'm Assistant Commissioner of Health for  
Environmental Services of the Westchester County  
Department of Health.

DIRECT EXAMINATION  
BY MR. ALEXANDER:

Q. Will you state for the record your educational and  
professional background?

A. I have an Associate Degree in Engineering from  
Fairleigh Dickinson College, a Bachelor of Science  
Degree in Sanitary Engineering from Rutgers, Master  
of Science in Environmental Health Science from New  
York University. I'm a Licensed Professional Engineer  
in the State of New York.

Q. In connection with the applications which are the  
subject of this hearing, do you have more than one

function, and if you do, will you please tell us what your functions are?

A. Yes, I do. I am representing the Westchester County Department of Health in its function in regard to the applications being considered here today, the New York State Department of Health concerning the public water supply, and the New York State Department of Health, New York State Department of Environmental Conservation as an agent for them in the review of plans for the sewage treatment facility.

Q. And in connection with those functions, have you prepared a statement?

A. I have.

Q. And does it deal both with the sewage plant and the water facilities?

A. Yes, primarily with the water facilities.

Q. Does it deal not only with the county's function but also with the state's function?

A. With the State Department of Health's function.

Q. Do you have a copy of that statement in front of you?

A. Yes.

MR. ALEXANDER: I ask that be marked for identification, or I'll even offer it in evidence.



MR. DICKERSON: Do you have any objection to having Mr. Weber read this statement into the record? We'll give a copy to the reporter. I would like the parties present to hear it.

THE WITNESS: I am Calvin E. Weber, Assistant Commissioner of Health for Environmental Services of the Westchester County Department of Health. I am presenting these comments on behalf of that agency and the Bureau of Public Water Supply of the New York State Department of Health.

On August 31, 1973, the New York State Department of Health filed a letter with the New York State Department of Environmental Conservation relative to objections to Water Supply Application #6284, which objections covered the following:

1. Adequacy of the available water quantity.
2. Lack of water quality data for turbidity, color, taste, odor, total dissolved solids and sulfates.
3. Lack of investigation of the possibility of a joint water supply system with nearby communities and/or the use of a New York City water

source.

In light of the above, a Notice of Appearance was filed by the New York State Department of Health on behalf of this speaker and Mr. George Phillip of the New York State Department of Health.

With regard to both the adequacy of the available water quantity and the lack of certain water quality data, these objections are herewith withdrawn.

The applicant, through his engineer, has met with the New York State Department of Health and has provided additional information concerning design criteria used in preparation of the engineering report accompanying the subject water supply application which provided needed data to remove the objection.

Further, the applicant, through his engineer, submitted additional water quality data for the aforementioned constituents, which show the water to be of satisfactory quality for human consumption at the time of sampling and for the constituents for which analyses were performed.

The engineer for the application has,



with regard to investigation of other sources of water supply, advised that other sources were looked into but found not to be feasible, and confirms that by the end of the fourth year of development, plans for additional water supply to serve a population in excess of 5000 persons will be submitted for consideration. The engineering report states that the initial water supply will be from wells developed on the property as shown on maps provided, and that during initial stages of development investigations will be undertaken to obtain an additional water supply capable of meeting the remaining demand. The sources to be investigated are a second aquifer or the Delaware Aqueduct of the City of New York.

The Bureau of Public Water Supply of the New York State Department of Health, by letter dated August 14, 1973, to the New York State Department of Environmental Conservation, has advised that it is satisfied with the approach outlined in a letter of September 11, 1973, from Nebolsine, Toth, McPhee Associates, applicant's engineering consultants, The Westchester County Department of Health also generally concurs with the statement set forth in the Nebolsine,

Toth, McPhee letter of September 11, 1973. However, the Westchester County Health Department maintains that a proposed residential community of the size and nature of Heritage Hills of Westchester should be provided with two independent sources of water supply to insure adequate continuous service to consumers. Unfortunately, experience with existing water supplies using only one source of water has not been such as to insure a continuous supply of water for domestic needs under all conditions. Considerable and expensive effort must now be expended to provide secondary sources of water supply.

The Westchester County Department of Health requests that assurance be given on the record that the waterworks corporation will actively and promptly begin investigation of an additional water source, with significant attention directed to the New York City Delaware Aqueduct, and that such secondary source of water supply will be developed at a rate commensurate with the rate of construction of the project to insure a continuous supply of water for the proposed project.

Development of a connection to the



Delaware Aqueduct to provide a community water supply to the northeastern part of Westchester County and an additional source of water to northern Westchester has been of considerable interest to the County for many years. The location of Heritage Hills of Westchester with respect to the Delaware Aqueduct could lead to the realization of this needed connection and source of water should further investigation show that such connection is feasible.

With regard to the development of the groundwater resource as the initial water supply for Heritage Hills of Westchester, the Westchester County Department of Health supports the concept subject to compliance with provisions of local and state health department regulations relating to public water supplies.

This concludes our statement with regard to the water supply application.

Concerning the sewage treatment plant, a waste water facilities report and engineering plans have been submitted to the Westchester County Department of Health by engineers for the Heritage Hills firm, which plans have been reviewed and are under review by the Westchester County Department of Health

with consultation with the New York State Department of Environmental Conservation and the New York City Department of Water Resources. No permit to discharge, which is now issued by the New York State Department of Environmental Conservation, has been issued, nor have any plans for a sewage treatment plant been approved to date. Action toward issuance of such permits and approvals has been withheld pending the outcome of this hearing.

BY MR. ALEXANDER:

Q. Mr. Weber, will you look at the last paragraph on the first page of your statement down at the bottom where reference is made to a letter dated August 14, 1973.

Can you tell us whether or not that date is correct?

A. I'd have to check the letter. Yes, the date in the last paragraph of the first page of my statement is incorrect. The date of August 14 should be September 14th, 1973.

MR. FLORENCE: Is that the letter from Nebolsine, Toth, McPhee Associates?

MR. ALEXANDER: This letter is in evidence.

THE WITNESS: That's the letter from



Gilbert Faustel of the New York State Department of Health.

MR. FLORENCE: It's already in.

MR. DICKERSON: That was the letter of the State Health Department withdrawing their notice of appearance and leaving it in the hands of Mr. Weber.

MR. BLASI: It's in evidence.

MR. FLORENCE: It's already in evidence?

O.K.

Q. Mr. Weber, in that same paragraph which referred to the letter of August 14, 1973, there was also reference to a letter dated September 11th, 1973 from Nebolsine, Toth, McPhee Associates. Do you see that?

A. Yes.

MR. ALEXANDER: I don't believe that letter is in evidence.

MR. DICKERSON: Yes, sir. Exhibit 30 consisted of the letter of Mr. Faustel with the attachments that he transmitted.

MR. ALEXANDER: That is in evidence.

I'm sorry.

MR. DICKERSON: That consisted of a

letter dated September 14th by Mr. Faustel in duplicate and attached to that a copy of the letter to him dated September 11th, 1973 signed by Walter McPhee.

Q. Mr. Weber, is there anything else that you wish to add to your statement or any further corrections that you feel are necessary to it as you read it?

A. None that I can think of at this time.

MR. ALEXANDER: I have no further questions.

MR. DICKERSON: Mr. Blasi, I'm going to give you first whack.

MR. BLASI: Mr. Examiner, the record is quite clear insofar as the position of the applicant in this case. As Mr. Weber has stated it, the intention of the applicant has been made known to the Department of Environmental Conservation and the statement that Mr. Weber makes as to the applications to be made will be taken under serious advisement by my clients and an answer and a statement will be placed in the record as soon as such a statement can be prepared and made a part of a reply to Mr. Weber. I might say as part of this record, I believe Mr. Weber knows that as far as this applicant is con-



cerned, both as to the County of Westchester and to the City of New York, that is, the department involved in the City of New York, careful consideration has been given to the requests and to the suggestions that have been made with reference to these facilities, and I have read into the record and asked, Mr. Examiner, that you take judicial notice of all of the protective provisions, not only in the Environmental Conservation Law, but also in the Transportation Corporations Law and I won't repeat them ad nauseum all the other disciplines statutorily expressed by the Legislature and by the different departments and regulations, so that all I can say is that we will meet or exceed the criteria which has been laid down. As to certain things, not having had a chance to read the statement carefully, there are some items which the client or its engineers believe should be made a part of this record, I would like, Mr. Examiner, that you give the applicant the privilege and the right to place into the record such additional material as may be necessary properly to complete this record.

MR. DICKERSON: Am I to take your request of judicial notice to be confined to those

items that you already officially and specifically requested?

MR. BLASI: Yes.

MR. DICKERSON: Thank you. I have no desire to read the Consolidated Statutes of the State of New York in toto.

MR. BLASI: All right.

MR. DICKERSON: Can I see a copy of that statement for just one second?

MR. BLASI: Could we have a copy made of that at my expense?

MR. DICKERSON: Let's take about a one-minute break.

(Short recess.)

(Continued on page 969)



MR. DICKERSON: Mr. Alexander, do you have any further questions?

MR. ALEXANDER: No, I have no further questions of Mr. Weber at this time.

MR. DICKERSON: Mr. Florence?

CROSS-EXAMINATION

BY MR. FLORENCE:

Q. Has anybody supplied you with any test borings or any other information dealing with any evidence of the size of this aquifer that's proposed to be used?

A. The only information that we have concerning the aquifer is that that's included in the water supply reports submitted as part of the application.

MR. DICKERSON: That's Exhibit No. 5 for the record.

Q. Mr. Weber, you are familiar with what would be generally accepted engineering principles in connection with the determination of the size of an aquifer, are you not?

A. Very generally.

Q. Isn't it true that the generally accepted engineering principle for determining it, first of all, the

extent of the aquifer is to drill wells until you drill outside of the aquifer and then to compare the draw-down within the aquifer and the effect of a well outside of that aquifer and then to use your curves to determine capacity and so forth after you have that kind of information?

MR. ALEXANDER: I will object to the form of that question and also on the ground that it's gone beyond the scope of his direct testimony.

Mr. Florence wants to make Mr. Weber his witness and I think he may do so at his own peril, but I still think the question is objectionable as to form.

MR. DICKERSON: I will sustain the objection on the form of the question. I think you ought to hack it into little pieces if you will.

MR. FLORENCE: All right, I'll cut it up a little bit.

Q. In determining the edge of an aquifer or the limits of an aquifer one must drill beyond it, is that true?

A. This is generally true, although that soils maps information can also be used to determine the edges of the aquifer.



- Q. Which is the more accurate determination?
- A. Actually drilling to find the actual edge.
- Q. Have you been supplied with information to permit you to in this application know with a reasonable degree of engineering certainty the edge of the aquifer which is intended to be tapped in this case?
- A. No, I have not, although I understand that during my absence the other day certain testimony was presented concerning the aquifer reservoir capacity.
- Q. Would you agree generally that the best determination of the ability of the aquifer and its scope is to take a well outside of the aquifer and to compare flows both before, during and after drilling water operations within the aquifer to determine the scope and extent of the aquifer itself, that is, the physical limits of it?
- A. If I understand your question correctly, I would say not necessarily so, because it's going to depend on many characteristics like the aquifer itself as to the extent of the draw-down and permeability of the soil and so forth.
- Q. Would you agree generally that the use of this information, that is the use of a well outside

of the aquifer, gives you added information that you wouldn't have with information solely of wells drilled within the aquifer.

A. Yes, it would, but I'm not certain in my own mind as to what information the well aquifer would give you.

Q. Would it, for example, give you a much more conclusive reading of the limits, that is, the physical limits of the aquifer itself?

A. If it's outside of the aquifer itself I don't see how it can be affected by any pumping within the aquifer.

Q. So it then follows that you would then know that the aquifer was not in the position where the well was outside? In other words, you would then have defined the limit of the aquifer.

A. This would give you information which would assist in defining the limits of the aquifer.

Q. I ask it specifically in relation to the presence of a reservoir on Exhibit 37 for identification. You are generally familiar with it, I presume.

MR. BLASI: I object to it. It's not

in evidence.



MR. FLORENCE: All right, I'll use a different one.

Q. In Exhibit No. 23 -- withdrawn.

You are generally familiar with the presence of a reservoir on the Sun Enterprises parcel south of the property involved in this application.

A. Generally familiar from maps that have been supplied to me, not from actual personal experience on the site.

MR. BLASI: I interpose an objection as to the characterization of it as a reservoir. I don't think there is any testimony or any proof in this record that it is a reservoir. It is a body of water, a pond or something like that. I think that reservoir has a very technical meaning, particularly to the County of Westchester.

MR. DICKERSON: I'm going to sustain the objection and ask you if you would care to rephrase the question using the term pond or body of water. The term reservoir has two meanings. It could have a very technical meaning or it could have a general meaning.

Q. Are you generally familiar with a body of water on the Sun parcel?

A. I am generally familiar on the Sun parcel from maps and plans which have been supplied, not from personal experience on the property.

Q. Do you have any engineering data that precludes that body of water as being fed from the same aquifer as is being used to supply fresh water or potable water in this application?

MR. BLASI: I object to the form of that question. It calls for a conclusion.

MR. DICKERSON: I'm going to ask you to rephrase the question again. Any data would or would not preclude anything. Is the question, are you trying to get to a point of what data might show or indicate? The data itself won't stop or start anything.

Q. Have you had any data supplied to you with relation to the applicant's aquifer that would assure you that it is not within the same aquifer as supplies the body of water on the Sun Enterprises parcel?

A. No.

Q. Are you satisfied as an engineer it is not the same



aquifer or do you have inadequate information to make that judgment?

A. Well, I would like to check the soil maps further before I make a definite statement to answer your question in that regard.

MR. DICKERSON: Let's go off the record for a moment.

(Discussion off the record.)

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MR. DICKERSON: O.K., ladies and gentlemen.

THE WITNESS: I have looked at the soils map and the accompanying booklet in Exhibit 32 and I've also looked at Exhibit 23, the USGS Map on which certain information was marked by Mr. McPhee during his testimony and based on the information marked on this map by Mr. McPhee I am reasonably certain that the two aquifers are different.

BY MR. FLORENCE:

Q. In relation to the necessity for use of an outflow device on the south side of Route 202, have you been consulted with relation to that?

A. You're referring to the outfall sewer?

Q. Yes.

A. Outfall of lime from waste from the treatment plant?

Q. I call it a sewer too.

A. The -- yes, we have been consulted in reference to that.

Q. All right. Have you been given alternate sites for the position of the sewer plant which would, in effect, alter the outfall device?

A. The waste water treatment plant, the waste water facilities reports that have been submitted to us and plans that have been submitted to us have only referred to the one site.

Q. Has your advice been sought; have alternate sites been requested?

A. We have discussed alternate sites with the applicant's engineers, but it is not up to us to give advice as far as alternate sites are concerned.

Q. All right. Did you discuss the possible site on the area which I say is the basin to the east with the unnamed brook?

A. Question Mark Brook?

Q. Yes.

A. No, that site was not discussed.



- Q. Was the site on the far west into the tributary of the Plum Brook as a site discussed?
- A. It was not -- not discussed at any of the conferences that we had, no.
- Q. It came to your attention that there were two brooks or two brooks at one time?
- A. Yes, we're generally familiar with the area and then there were certain reports submitted to us which did make reference to other brooks.
- Q. I'm in a quandary. In relation to the quantity of water, you heard the testimony of Mr. McPhee, didn't you?
- A. Yes, I did.
- Q. Are you satisfied that both the figure given indicates an adequate source of a quantity of water from your own experience?
- A. At least for the initial stages of the development of the project.
- Q. All right. Do you have reservations as to the full and final stages of development, whether that aquifer in the results demonstrated in the testimony so far would be adequate?
- A. I wouldn't say there were reservations but as I

indicated in my statement, we are desirous of seeing that or at least urging that a second alternate, a second source of water be evaluated and provided in order to ensure a continuing source of water under all conditions.

Q. Has your office been asked to consider the possible effect of the outflow from the plant upon the existing stream?

A. Yes, we do this as a matter of course in evaluating the applications and reports.

Q. And does your office have flow data or purity data on the southern portions of the Brown Brook where the outflow water would mix with the stream?

A. There is some data that has been submitted to us by the applicant's engineer. As far as flows are concerned, there is certain information submitted to us by the applicant and an environmental impact study which was made. There is certain other data which we obtained and certain other data submitted by your client.

Q. Do you have copies of that data?

A. Yes, I do.

Q. May I examine them, please?



A. I had a feeling that was coming.

MR. DICKERSON: Just relax for a second.

(Discussion off the record.)

MR. DICKERSON: Ladies and gentlemen, we'll go back on the record. I had interrupted the proceeding there to see if we could proceed. We did get Mr. Weber's statement. Mr. Weber will be subject to further cross-examination and all parties will have a crack at him. Mr. Blasi will complete his direct examination or redirect, we'll try and patch it all up tomorrow. How much more we're going to do in seven minutes, I don't know, so this hearing, if there are no objections, I'd like to start at a new time tomorrow morning, 9:30. The hearing will stand adjourned until 9:30 tomorrow morning.

(Whereupon, at 4:52 p.m. the hearing was adjourned to reconvene on Thursday, October 4, 1973, at 9:30 a.m.)

I N D E X

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<u>Witnesses:</u>	<u>Direct</u>	<u>Cross</u>	<u>Redirect</u>	<u>Recross</u>
Leonard J. Bibbo		799		
Calvin E. Weber	957	969		

E X H I B I T S

	<u>For Id.</u>	<u>Evid.</u>
Ex. No. 36 - Letter to DEC from Leonard J. Bibbo	826	
Ex. No. 37 - Map	871	
Ex. No. 38-A - Water Analysis - North end near 202	935	
Ex. No. 38-B Water Analysis - South end Reservoir No. 2	935	